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BRAWN VS. POWER

TEN years ago, brawn aplenty was required to make a wire change on a Fourdrinier. Lifting and carrying breast roll, table rolls, savealls, bearings, suction boxes, etc., required brute strength. Even today some mills keep on using such obsolete methods as dismantling and re-assembling of the Fourdrinier when a wire is to be changed.

BELOIT IRON WORKS,
BELOIT, WIS.

Showing Beloit Removable Fourdrinier with rails ready to swing into position, enabling entire Fourdrinier to be rolled out by power as a complete unit.

Events of 1909

Roosevelt leaves for Africa

Over 20 Years Ago E B G Pioneered in the Manufacture of Liquid Chlorine

The first pound of Liquid Chlorine produced in the U. S. A. 1907

THE name of Theodore Roosevelt, twenty-sixth president of the United States, always will stand for the dynamic spirit that conquers every obstacle to progress.

The year that he relinquished office, and set sail for Africa, was signalized by another conquest, this time in the industrial field. It was the introduction of Liquid Chlorine for bleaching. To E B G went this honor of first liquefying Chlorine Gas in the United States.

The striking advantages of Liquid Chlorine have been broadened by the scientific manner in which E B G has conducted its manufacture, distribution, and assisted in its efficient use.

Strict excellence is maintained by expert technical control, by large and modern production facilities. These constitute real advantages for E B G customers.

Liquid Chlorine

Electro Bleaching Gas Co.

PIONEER MANUFACTURERS of LIQUID CHLORINE

PLANT:
Niagara Falls, N. Y.

MAIN OFFICE:
9 East 41st Street
New York

Entered as second class matter August 12, 1925, at the Post Office at East Stroudsburg, Pa., under Act of Congress of March 3, 1879. ESTABLISHED 1872 FIFTY-SEVENTH YEAR Published every Thursday by the Lockwood Trade Journal Co., at 34 N. Crystal St., E. Stroudsburg, Pa. EXECUTIVE AND EDITORIAL OFFICES: 10 East 39th Street, NEW YORK CITY. CHICAGO, 123 West Madison Street, Chicago, Ill.

TO WITNESS THE PERFORMANCE OF A CAMACHINE IS TO KNOW ITS MERITS

The true test of CAMACHINE'S efficiency and aptitude to fill all requirements in slitting and roll-winding is likened to any other type of machine, and that is by actually seeing one in operation. Better still is it to judge the choice of a machine by comparing contemporary types of machines in order to determine their values to meet a veritable need.

So sure are we to prove that a CAMACHINE will fill all roll-winding requirements, we cheerfully offer to install a CAMACHINE, without any obligation, and would preferably have it demonstrated under these conditions.

Compare CAMACHINE *Performance With Others and Let Your Own Judgment Be Your Guide*

Write Us for Particulars

CAMERON MACHINE COMPANY

61 POPLAR STREET BROOKLYN, NEW YORK

PAPER TRADE JOURNAL

ESTABLISHED 1872

THE INTERNATIONAL WEEKLY OF THE PAPER AND PULP INDUSTRY AND THE PIONEER PUBLICATION IN ITS FIELD

FIFTY-SEVENTH YEAR

Published Every Thursday by the

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U-BAR

Built for the Job

An Open Letter to Pulp and Paper Men

IT IS thirteen years since you read the first announcement of the American Barking Drum. From time to time since then you have read of improvements as they were made—one of which was the U-Bar construction which was originated by us. Now pause for a moment. Consider these reports:

One well known company started barking with a smooth-interior drum. They say, "When we first started barking the wood slipped back too much and we put in baffles to carry it up." Such slipping increases as the diameter of the drum increases. Now they use U-Bar Drums exclusively.

U-Bar Drums are rivetted. Ever since the first one was built, our engineering department has studied and tested all possible joining methods. As far back as 1920, for instance, we tried welding. It was not satisfactory. So until a stronger and more perfect method is discovered, the rugged dependable *multiple-rivet* joint will continue as a feature of the U-Bar Drum—the drum built to withstand the constant hammering and pounding of the daily and yearly barking grind. Building 300 drums that are giving good service day in and day out has convinced us that the rivetted *joint* is the *permanent* joint.

U-Bar Chain-Suspended Drums in the Volga River Paper Mills of Kourza, in the Nizhni Novgorod District, Russia—far away, where rugged dependability is absolutely essential.

And Speed Is Important

Then consider speed. Important because it increases or reduces capacity. The U-Bar Drum (10 ft. diam.) runs from 7½ to 10 R.P.M. One mill reports a U-Bar Drum running smoothly at 12 R.P.M. That's PRODUCTION.

So in addition to the ordinary guarantee of materials and workmanship, we guarantee for two years—3000 operating hours per year—running at 7½ R.P.M. Think of it!

Speed determines your capacity—be sure it's included in your guarantee.

In United States, Canada and Newfoundland there are *twice as many* of our U-Bar Drums in operation as *all other drums combined*. And our sales for the past four years average 20 drums per year, many of them reorders from mills that are increasing their capacity. And what better testimonial could be found for any piece of machinery?

The E-Z Opening Bag Company writes, Feb. 14, 1928, "Please send us 20 feet of chain. This is the first and only repair on our drum which has been in operation since early 1924. We are more than pleased." Four years of uninterrupted service! *They bark dry.* And another Canadian Mill matches this report: "A $50 maintenance cost in 4 years with an average capacity of 16½ cords per hour." That's something to think about.

Just ask the mills that use them. That, after all, is the soundest source of information.

SOME OF THE MILLS USING OUR DRUMS EXCLUSIVELY

Abitibi Power & Paper Co., Ltd., Iroquois Falls, Ont.	8 Drums
Abitibi Power & Paper Co., Ltd., Espanola, Ont.	5 Drums
Abitibi Power & Paper Co., Ltd., Sturgeon Falls, Ont.	4 Drums
Abitibi Power & Paper Co., Ltd., Sault Ste. Marie, Ont.	9 Drums
Canada Power & Paper Corp., Shawinigan Falls, Que.	4 Drums
Donnacona Paper Co., Ltd., Donnacona, Que.	4 Drums
Fort Frances Pulp & Paper Co., Ltd., Fort Frances, Ont.	5 Drums
Hawk Lake Lumber Co., Ltd., Cochrane, Ont.	3 Drums
Lake St. John Power & Paper Co., Ltd., Dolbeau, Que.	4 Drums
Ontario Paper Co., Ltd., Thorold, Ont.	6 Drums
Powell River Paper Co., Ltd., Powell River, B. C.	6 Drums
Thunder Bay Paper Co., Ltd., Port Arthur, Ont.	4 Drums
Wayagamack Pulp & Paper Co., Ltd., Three Rivers, Que.	4 Drums
Brown Company, Burgess Mill, Berlin, N. H.	6 Drums
Consolidated Water Power & Paper Co., Wis. Rapids, Wis.	3 Drums
Consolidated Water Power & Paper Co., Appleton, Wis.	3 Drums
Detroit Sulphite Pulp & Paper Co., Detroit, Mich.	3 Drums
International Paper Co., Ogdensburg, N. Y.	3 Drums
Munising Paper Co., Munising, Mich.	3 Drums
Nekoosa-Edwards Paper Co., Port Edwards, Wis.	4 Drums
Nekoosa-Edwards Paper Co., Nekoosa, Wis.	3 Drums
Southern International Paper Co., Mobile, Ala.	2 Drums
St. Regis Paper Co., Waddington, N. Y.	3 Drums
West Virginia Pulp & Paper Co., New York, N. Y.	8 Drums
International Power & Paper Co. of Newfoundland, Ltd., Corner Brook, Newfoundland	7 Drums
Volga River Paper Mills, Russia	4 Drums

DEPENDABILITY • ECONOMY • STRENGTH • SPEED • CAPACITY

Fibre Making Processes, Inc., Chicago, U. S. A.

CANADIAN BARKING DRUM CO., LTD., TORONTO

ESTABLISHED IN 1872

PAPER TRADE JOURNAL

With Which Is Combined

PAPER

Vol. LXXXVIII, No. 14 Thursday, April 4, 1929

To Build $3,000,000 Mill At Everett, Wash.

This Is To Be The Immediate Result of a $12,000,000 Merger of Washington Pulp Mill, Railroad and Timber Interests—Ossian Anderson Is To Be President of the New Concern To Be Known As the Puget Sound Pulp & Timber Co., Incorporated in Delaware —Consolidated Properties Include a 90-Ton Mill at Bellingham

[FROM OUR REGULAR CORRESPONDENT]

PORTLAND, ORE., March 29, 1929.—Construction of a $3,000,000 pulp mill at Everett, Wash., is to be the immediate result of a $12,000,000 merger of Washington pulp mill, railroad and timber interests.

Properties Included

The consolidated properties include San Juan Pulp and Paper company, operating a 90-ton pulp mill at Bellingham; the Fidalgo Pulp Manufacturing company with a 60-ton pulp mill at Anacortes; the Skagit Valley Lumber company at Clear Lake; the Rucker Brothers Logging and lumber operations at Lake Stevens; the Puget Sound and Cascade Railway company with 50 miles of track in Skagit county; and the Hartford and Eastern Railway company with tracks from Hartford to Monte Cristo in Snohomish county. Monte Cristo is a popular summer resort and the deal involves transfer of the Big Four inn at that place.

The Puget Sound Pulp and Timber company, a Delaware corporation, is the holding company of these consolidated units. Half of the $12,000,000 capital consists of common and preferred stock, with no bonds.

Ossian Anderson, President

Ossian Anderson, president of the San Juan and Fidalgo pulp companies is president of the newly formed organization; P. F. Knight, vice-president and general manager of the Mutual Lumber company is first vice-president; William Morrison, vice-president of Morrison Mill company is also a vice-president; H. R. Lawton, vice-president of Peirce, Fair & Co., is secretary and Neil Saxton, treasurer. H. W. Bunker, president of the Coos Bay Lumber company, is chairman of the board of directors.

The Directors

Other directors include W. N. Winter, president of the West Coast Telephone company which recently acquired several independent exchanges in Oregon; U. M. Dickey, president of the Consolidated Dairy Products company; R. H. Miller, director of the Seattle National Bank of Commerce; H. M. Robbins, president of the Clark Nickerson Lumber company; O. M. Green, president of the Olympia National bank; and Peter G. Schmidt, president of the Schmidt Estate company.

It is reported that the Everett mill will be the first unit of several projected by the corporation directors. This mill will be of 150-ton capacity, and construction will start as soon as the bond issue necessary to a new industrial water supply is voted upon. It is said that the mill will employ about 600 men.

To Build Big Mill on Snohomish River

PORTLAND, Ore., March 29, 1929.—Following announcement of a new $3,000,000 pulp mill to be built at Everett, Wash., by the Puget Sound Pulp and Timber Company, comes the probability of a second big plant to reach or exceed the cost of the first mill, by the International Wood and Sulphite Company, a subsidiary of the Zellerbach interests.

K. O. Fosse, representative of the latter corporation, obtained a 60-day option on 39 acres of land on the Snohomish river immediately east of the Canyon Lumber Company. The deal also included a contract with the Canyon firm for the entire waste from the sawmill for the next 20 years, starting October 1, 1929. The land under option is owned by the Canyon company and the Thomas Irving interests.

The city of Everett is now going ahead with a $2,000,000 industrial water system.

Paper Mill Employment

Employment and payrolls in pulp and paper mills and the paper box industry all increased in February as compared with January according to information compiled by the Bureau of Labor Statistics, Department of Labor, at Washington, D. C.

Reports were received by the Bureau from 217 paper and pulp mills which gave their January employment at 60,148 increasing in February to 60,438 an increase of 0.5 per cent. The payrolls in these identical mills also increased from $1,620,255 in January to $1,667,264 in February, an increase of 2.9 per cent.

The Bureau also received reports from 185 paper box factories which gave their January employment at 19,166, increasing in February to 19,239, an increase of 0.4 per cent. The payrolls in these factories also increased from $430,980 in January to $438,341 in February, an increase of 1.7 per cent.

Michigan Superintendents Meet

KALAMAZOO, Mich., April 2, 1929.—The Michigan Division of the Pulp and Paper Mill Superintendents Association met Thursday, March 21, at the Columbia hotel. Grellet N. Collins of the Bryant Paper Company spoke on "Paper Mill Control." Dinner preceded the program.

Pennsylvania Board Mills Curtail Output

With Demand Falling Off After Recent Buying Spurt, Manufacturers Have Slowed Up Production to From 75 to 90 Per Cent of Total Capacity—Wrapping Paper Moving In Excellent Volume Despite Prevailing Hesitancy to Stock For Future Requirements

[FROM OUR REGULAR CORRESPONDENT]

PHILADELPHIA, Pa., April 1, 1929.—Though the trade reacted from the more active demand of February the closing days of March were more lively in meeting the needs of the Easter season. The market as a whole was not responsive to the awakened Easter buying, but was concerned with meeting requirements of the mercantile trades now engaged in renewed shopping characteristic of the Pascal season. Wrapping paper dealers were the most active of the paper merchants as orders mounted though demand still continues to be of the hand to mouth type prevalent in the post war years and indicating the hesitancy of the consumer to stock for future requirements A few of the fine paper dealers reported slightly improved business but on the whole the industry was subjected to the same uncertainty.

The mercantile trades have been buying more freely of containers and prices have been steadier. Building papers move slowly but frequent inquiries for near future deliveries indicate that builders are prepared to enter the paper market at an earlier date as contractors effect plans for the usual outdoor construction of this season. Bags are in fair demand at the increased prices and wax papers and grease proof products are among the Easter specialties that just now are moving in better volume.

As the demand for boards wanes after a sudden spurt of buying in the early days of the year the manufacturers are slowing up production and mills have been scheduled to from 75 to 90 per cent of capacity. Converters of glassines continue to suffer from keen competition although efforts are being made to stabilize the industry. Converters of rolls have been fairly well occupied with odd lot conversion of small roll products for cash registers, ticker tapes and gummed specialties that are needed for the Easter holiday mercantile shopping. Roofing paper manufacturers are running full with the spring demands anticipated and although the dealers are somewhat delayed in the spring buying by builders the mills are well filled with orders for several weeks to come.

There has been a spotty raw material market with few of the grades in active demand. While these conditions of dragginess prevail no changes are made in prices owing to the scarcity of all the lines. Rags are not moving in volume but a few of the lines needed for the manufacture of building felts and roofings are in demand. Mills, however, are making frequent inquiries, indicating that a livelier market will shortly be at hand.

Paper Dealers Meet in Joint Session

With a view to bringing before the associated group of paper merchants in the Quaker City organization and those who are not identified with the body, the constructive work that is being carried on by the Survey Committee of the National Association, there was held a special meeting in the Bourse Café last Thursday at which the president of the local body, Simon Walter, told of the activities of the national committee . This meeting was attended by the merchants in the wrapping paper branch of the Philadelphia industry and fourteen firms were represented at the session. During the luncheon President Walter told of the detailed survey which the committee had made and which was placed before the members and nonmembers of the local trade in booklet form and included the cost system as it has been worked out under the supervision of the National Survey Committee. This booklet created much favorable comment from all those attending because of its excellent methods of estimating the cost of conducting business and its usefulness to those who were intent on profitable trading in the paper markets. This booklet shows the average cost of doing business and is divided into four classes of average monthly sales. This covers all classes of wrapping paper merchants from the largest dealers to those of smaller establishments. An analysis of the book was made by President Walter, the paper men referring to the book as its contents was explained by the local chief executive. When he had completed his talk there was open forum discussion on the booklet and many favorable expressions on its contents as valuable in guiding the wrapping paper merchant in his estimates of overhead. It was announced that another meeting would be held in the near future and the nonmembers attending expressed their desires to be present for the purpose of acquiring further information of the National association's work.

Paper and Twine Merchants Plan Spring Meeting

Members of the Philadelphia Paper and Twine Merchants Association, which recently changed its name so as to give broader meaning to the scope of its activities in the industry, planned a fellowship gathering which will be held in the coming month at the March session of the organization held last week at the Benjamin Franklin Hotel. The fellowship session is scheduled for April 19 at the Roxborough Country Club, when there will be a joint business meeting to be followed by a dinner dance and other diversions throughout the remainder of the day. This program will contain besides the chicken and waffle dinner other entertainments in the way of dancing, card playing and vaudeville sketches by professional talent and by members. President George K. Hooper, of the association and of the Hooper Paper and Twine Company, Inc., as a versatile performer on the trap drums, will be a headliner, along with another trade prodigy in sleight of hand, Robert Richards of the Buffalo Envelope Company, who will give a "Houdini" act for his fellows to follow the dinner. There will be prizes for the card and dance features, awards being made to best player and dancer. E. L. Richards is chairman of the entertainment committee. The fair sex will be in attendance as guests.

At the session held last week two new members were admitted to the association. They were the Bibb Manufacturing Company, of Macon, Ga., represented by S. M. Franks, Philadelphia representative of the company, one of the oldest and largest of manufacturers of polished cotton twines in the country; and the Fort Howard Paper Company, Green Bay, Wis., represented by I. M. Miller, who travels Maryland, New Jersey, Delaware and Eastern Pennsylvania for that producer of towels and crepe papers. Byron Clark addressed the members during the luncheon, giving a detailed account of the growing of hemp from the planting of the seed, its cultivation, exporting and the purchase of the bundled jute from samples at cash before delivery, the sorting and grading of the jute in this country and apportioning it for paper makers twine, box twine, baling rope and tube rope, with reservation of the finest quality for various jute papers.

Graphic Arts Frolic

Plans for the coming Graphic Arts Frolic, to be staged at the Manufacturers Club, Broad and Walnut streets, on April 4, were completed by the Typothetae of Philadelphia last week. The annual event will be known as "Modernistic Nite" and attendance limited to 550 against previous affairs of this sort when as high as 1,000 were present. The annual event is the get-together party of the paper trades and the printing industries. It will be an informal gathering with costumes for those who desire the novelty makeup of modernistic trend. Following the dinner there will be dancing and a long list of high class vaudeville with prize awards given according to ticket selected after the dinner hour. This

year the Graphic Arts Frolic was postponed until April in order to avoid the Lenten season.

Waste Paper Men Aid Clean Streets

An idea in aid of the movement for clean streets prompted the formation of the waste paper dealers of the Quaker City into an organization to be known as the Philadelphia Waste Paper Dealers Association, which met last week and elected William A. Coll as its president. Organization of the association was promoted by the Civic Club of Philadelphia which called a gathering of the dealers in the preceding week at the Civic Club headquarters, 13th and Spruce streets for the planning of the co-operation of the dealers with the city authorities in maintaining an orderly collection of waste papers. Following the organization of the retail waste paper men at the Civic Club there was a meeting last week at the Kauffman Cafe, 8th and Girard avenue, where plans were laid for the permanent association. At this meeting there were sixty retailers of waste paper who agreed to the plans for application of a charter under the laws of the State of Pennsylvania and who elected officers for the next six months. The officers elected were: President, William A. Coll, head of W. A. Coll Company; Vice President, H. F. Wilson, H. F. and H. P. Wilson Company; 2nd Vice President, S. Halpern, M. Halpern and Son; Secretary, Henry Rosenbaum; Treasurer, L. Bornstein, L. Bornstein Company. President Coll has been associated with the waste paper industry for more than 25 years and formerly was engaged in the wholesaling of paper stock. It was under his direction that the present organization was formed in co-operation with the Civic Club and the City of Philadelphia for the movement in keeping the streets clean. When the next meeting takes place in the coming week, there will be formulated rules for the gathering of waste paper in line with the plans of the municipality and its efforts for the elimination of strewing waste matter over the side walks and streets . Other trade practices will be acted upon with regard to packing, sorting and storing of these trade commodities.

Passing of John W. White

An old time trade associate who for many years was identified with the C. S. Garrett Paper Corporation passed away during the week, when John Wesley White died at his home, 416 Sycamore avenue, Merion. Mr. White retired from the Garrett Corporation three years ago when he was stricken with the ailment which resulted in his death last week. Before joining the Garrett Corporation he was connected with the Coates Spool Cotton Company, from which he resigned upon its merger with the Clarke Company of New York and its removal to that city. Surviving are his widow Ida, a daughter Mrs. Howard H. Mitchell, and a brother Charles A. White.

Japan Paper Company Shows New French Papers

For the spring offerings of imported papers the Japan Paper Company, through its Philadelphia branch in the Witherspoon Building, under management of Warwick C. Miller, is showing a complete new assortment of French papers. These new importations were purchased recently by J. L. Rahn, of the New York headquarters, who spent two months abroad seeking novel effects in paper wares adapted for stationers, printers and advertising specialties. Mr. Rahn just returned from this tour in foreign parts and the lines of French papers followed and will be on display in the Quaker City offices by mid April. There will be shown effective hues in announcements, papers for papeteries and other social stationery, of the latest Parisian modes.

Hooper Paper & Twine Co. Inc. Additions

Extending its line of paper specialties the Hooper Paper and Twine Company, Inc., 270 South American street, has stocked a line of the Kensington metal clasp envelopes, adapted for commercial purposes and the Puritan drinking cups. The Kensington envelopes are of the open end type made of kraft and manila papers, and are produced by the Kensington Division of the American Paper Goods Company. The Puritan drinking cups are stocked in both the round and flat shapes, and the Hooper company is one of the duo of local distributors for these sanitary products. Preston Rhodes is looking after the sales of the Kensington metal clasp envelopes. These new lines will augment the extensive assortment of paper specialties in wrapping papers and twines and allied products carried by the Hooper Company.

Buffalo Envelope Co. Brings Out New Bank Envelopes

Within the next thirty days there will be marketed by the Buffalo Envelope Company, of Buffalo, N. Y., a line of specially manufactured envelopes adapted for use by bankers and brokers and financial institutions requiring an extra strong product of this character. The new envelopes will be constructed of paper developed by the Buffalo company in its own laboratories and will have unusual strength and durability. It will be distributed in the Philadelphia territory by the local branch of the Buffalo Envelope Company, in the Drexel Building, under management of E. L. Richards.

Samuel S. Alcorn Extensions

Having recently removed to larger quarters at 219 South 5th street, Samuel S. Alcorn has developed new lines of paper sales, among them being the line of Dan-D Fold paper napkins and the Hoberger paper towels. The Dan-D Fold napkins are manufactured by the Daniel Manufacturing Company, Rhinelander, Wis., and are of the white grades sold in conjunction with a container combination for use by restaurants. The Hoberger towels are produced by the Hoberger Paper and Fibre Company, Green Bay, Wis., and are sold in combination of a metal container for the interleaving type of towels of various popular grades.

Atlas Paper Co. Improvements

Since acquiring the large paper warehouse which for many years has been a trade center at 2nd and Vine streets, the Atlas Paper Company has made extensive improvements in its business devoted to the distribution of paper napkins and towels, wrapping papers, twines and allied specialties. The firm purchased the five story paper building at the northeast corner of 2nd and Vine streets recently occupied by the Resnick Paper Company and formerly the home of the Dyson Company and the Kardon Paper Company. The building has been reconstructed into modern paper quarters and a converting plant for its own use, and here are distributed several new lines of paper napkins made under own labels as well as those of the Hunt Modern Folding Napkins with German silver dispenser combination container. There have also been added new towels of several manufacturers. The addition of stocks necessitated extension of the delivery service and two new Diamond-T Trucks were secured for shipping purposes. Additional products that have been installed in the new home are the paper doilies, various boxes for ice cream, pastry, cake and oyster containers and new assortments of twines which are in line with the plans for expansion of the proprietor, Jacob Zacher, carried out in the enlarged quarters.

Garret-Buchanan Co. Extends Sales Forces

Walter Schiber, who formerly was connected with the staff of the Schuylkill Paper Company, is now attached to the wrapping paper section of the Garrett-Buchanan Company as assistant to Joseph Weaver, its manager, John T. Green, Atlantic Seaboard representative of the firm, is vacationing in Miami, Fla.

Amalgamated Tablet Co. To Open Plant

FORT EDWARD, N. Y., April 1, 1929.—The new plant of the Amalgamated Tablet Company has been completed and is now ready for occupancy. Machinery is now being brought here and it is planned to start operations within a few days. A large force of workmen are being employed in installing the new equipment in the plant which adjoins the mill of the International Paper Company. The factory, which was built by the Domil Construction Company, is one story high having about 16,000 square feet of space available for manufacturing purposes. The company will manufacture writing tablets on an extensive scale obtaining their raw materials from the International Paper Company. It is understood that the Brooklyn plant will be abandoned with the start of operations here. About 75 workers will be given steady employment.

Superintendents Meet at Lynchburg, Va.

Southeastern Division of the American Pulp and Paper Mill Superintendents Association Is Addressed At The Virginian Hotel by R. R. Foster of the Westinghouse Electric & Mfg. Co., of Pittsburgh, Pa. and by G. M. Trostel of the Champion Fibre Co.

LYNCHBURG, Va., April 1, 1929.—The Southeastern Division of the American Pulp and Paper Mill Superintendents Association held a successful meeting at the Virginian Hotel here, Saturday, March 23. The committee of arrangements to which a great deal of credit is due for the success of the meeting consisted of John H. Heald of the John H. Heald Company, B. K. Steadman of the Standard Paper Manufacturing Company, and William Brydges of the Bedford Pulp and Paper Company, who is also chairman of the Division.

Instead of following the usual custom of having a great number of papers read, all of the day was devoted to round table discussions of practical paper making problems.

Types and Application of Steam Turbines

R. R. Foster of the Westinghouse Electric and Manufacturing Company presented a very interesting paper, illustrated with slides showing different types and applications of steam turbines. Mr. Foster was followed by W. G. Brace of Westinghouse Electric and Manufacturing Company who gave a very informative talk regarding different types of stokers as well as installations using powdered coal.

Following this paper and talk was a spirited round table discussion in which it was brought out that the average man's aversion to the use of "exhaust" steam as against "live" steam was due to attributing physical characteristics to these two steam terms, something that is "live" being quite naturally preferred to something "exhausted." However, five pounds of exhaust steam as it comes from the exhaust of an engine or turbine is just the same as if it came from the boiler at that pressure, pressure being a short way of expressing the heat condition of steam.

The question as to what extent is by-product power possible and justified in the pulp and paper plant was brought up. The consensus of opinion seemed to be that with modern equipment, only in rare instances did any steam power need to go unutilized in some way, this steam economy being the result of correct planning and estimating. The first step being finding out the electrical requirements, given the amount of power needed in the plant, the quantities needed at different pressures, then it could be quite accurately decided what was needed at the boiler. The extent to which by-product power can be used to advantage depends on the extent to which there is a use for exhaust steam. The degree to which by-product power can be used may be limited by the fact that there may only be use for exhaust steam 50 per cent of the time.

It was agreed that seldom could a central power station deliver power to the mill as cheap as the mill itself could produce it, figures as low as 3 mills per K.W.H. being cited.

The question of the kind of steam best suited to the drying of paper developed several opinions, it being stated that steam introduced into a different part of the dryer would produce a marked difference in the drying of the paper, the pressure of the steam itself as it entered the dryer remaining unchanged. This was attributed to the change in the rate of flow of the steam along the inside face of the dryer shell. It was also claimed that the use of wet steam seemed to eliminate the film of gas around the inside of the shell which apparently had an insulating effect, the wet steam effecting a greater degree of heat transferred. When there was insufficient low pressure steam available for drying and live steam had to be introduced, it required many times the amount of dry steam to get the result. Also, the finish was not as good with dry steam. In connection with the drying of paper it was brought out that an increase of 40 per cent in dryer capacity resulted in an increase of machine production of only 20 per cent.

It was claimed that the pre-dryer was one of the best things for certain grades of paper so far developed. In an instance cited, using 25 lbs. of steam in the baby dryer when making a 70 pound sheet, the felt ran over 100 days where before they had only lasted 40 to 60 days. Mr. Foster of Westinghouse recommended that anyone interested in heat and power problems should secure from the American Society of Mechanical Engineers, 29 West 29th street, New York, the paper "Balancing Heat and Power in Industrial Plants," presented by R. V. Kleinschmidt at the Annual ASME meeting December 3 to 7, 1928. This paper contains a number of very useful charts.

G. M. Trostel Speaks

G. M. Trostel, superintendent of the soda and sulphite department of Champion Fibre Company, Canton, N. C., presented a paper on Sulphate Smelter Construction, Design, Repair, Maintenance, and Operation.

Discussion of this paper developed the fact that some users of this equipment make their own lining, using crushed soapstone and cement. An instance was cited where a water jacketed smelter created its own lining and gave long and satisfactory service.

A questionnaire on "Shrinkage," A. T. Taylor, chemist for the Bedford Pulp and Paper Company, acting as chairman, was so interesting and developed so many points for discussion that it could not be completed in the time allotted. Dr. Hugh Baker is authority for the statement that the paper mills of the United States are suffering a fiber loss of $25,000,000 per year in the white water. One member defined shrinkage as the difference between what you furnish and what you ship. It was brought out that there existed no standard method of figuring shrinkage, some mills including size, alum, clay, etc., and others disregarding these items. It was generally agreed by the members present that items of this sort, which had to be paid for, should be included.

One of the difficulties in using the beater furnish as a factor being that the furnish might vary from 6 per cent to 5 per cent—a difference of 16 per cent, with no change in the volume of water. Another factor to be reconciled is that paper is not sold on the same basis of dry matter as the materials from which it is made, pulp, clay, alum, etc. While it would simplify the figuring of shrinkage to get the difference between the raw materials taken in and the paper shipped, as one member suggested, disregarding the broke entirely, it was pointed out that one month a mill might start with 5 per cent broke and the next month have 10 per cent; using this 10 per cent of broke would probably result in close to a 100 per cent yield. The mill desregarding broke would be unable to figure shrinkage with any degree of accuracy.

Slush stock was mentioned as introducing an almost unmeasurable variable. It was pointed out that until the National Association got back of the project to standardize on methods of figuring shrinkage, working with the Technical Association, it would be impossible to secure comparable results. A mill using 1,500,000 gallons of water a day, if 1/10 of 1 per cent of suspended matter could be precipitated out and retained in the sheet, it would result in a gain of six tons per day.

Against this optimistic thought, one member reported a 15 per cent shrinkage, of which they could only account for 62 per cent. This left about 38 per cent of the total shrinkage unexplainable. As a part of this furnish was overissue news, the solubility of the ink, the possible hydrolysis and loss of the gums and noncellulose content of the ground wood in the news were advanced as partial explanations.

As a means of checking possible losses due to the presence of non-cellulose material in the fiber furnish, the suggestion was made that samples of beater water and machine water be taken and evaporated to determine the difference between them. The difference in shrinkage being greater with an 80 per cent ground wood 20 per cent sulphite furnish than with 20 per cent ground wood, 80 per cent sulphite, allowance being made for difference in fiber length, seemed to indicate that the theory of a certain degree of fiber solubility was worthy of further investigation. White water losess were also mentioned as being affected by the amount of alum in the furnish.

At the Luncheon which was served at the Virginian Hotel, music was furnished by Pat Taylor's Orchestra.

J. S. Schumaker Speaks on Humanics

J. S. Schumaker made a short talk on Humanics which is a comparatively new subject but one that Mr. Schumaker is thoroughly versed in. The audience was greatly impressed with this talk which dealt with the proper relation between the mill superintendent and the men in his employ.

Features of the Banquet

At the Banquet James G. Ramsey, first National Vice President, gave a very interesting talk and urged that all attend the convention at Wausau. Mr. Ramsey was followed by James F. Peake, Professor of Political Science at Randolph-Macon's Woman's College, Lynchburg, Va. Professor Peake talked along the lines of permanent peace and stated that war never has and never will prove the right of a cause. The Civil War, he stated, did not decided that the South was right or wrong, but the North won because it was richer in wealth and resources than the South. By the same token because the Allies apparently won the world-war, it did not necessarily follow that they were entirely right and Germany was entirely wrong. Professor Peake urged that we lend all of our influence toward promoting world peace and that a permanent World Court, League of Nations, or some other body decide future disputes by arbitration.

War is carnage and there is no such thing as a nation actually winning a war. We say that England and France were on the winning side in the war. What do they have that proves that they won the war—a long list of dead, millions living but disabled from the war, unhealthy economic conditions. Bill Brydges presided as toastmaster.

Pat Taylor's Orchestra also played at the Banquet and Lynchburg's Famous Quartette, the Twilight Singers, enraptured all of those present by their wonderful negro spirituals, catchy songs, etc. They received encore after encore.

Those in Attendance

The following were present at the meeting: Heth Owen, Albemarle Paper Manufacturing Company; F. J. Morrison, Hummell-Ross Fibre Corporation; R. N. Watts, Cheney-Bigelow Wire Works; W. J. Burns, Sonoco Products Company; Norman G. Brace, Westinghouse, Philadelphia; R. C. Stewart, Shartle Brothers Machine Company; H. F. Hoffman, General Dyestuffs Company; Thos. N. Rider, H. Waterbury & Sons; E. G. Farnsworth, Farnsworth & Co.; J. M. Denton, Bedford Pulp and Paper Company; Mr. and Mrs. C. J. Baker, Bedford Pulp and Paper Company; Mr. and Mrs. S. C. Foster, C. W. Baker, Jr.; C. R. Oberfell, John Heald Company; William Heald, John Heald Company; Lester W. Crouse, Paper Maker Chemical Corporation; B. K. Steadman, Standard Paper Company Mr. and Mrs. J. G. Ramsey, Jessup & Moore; E. L. Pemberton, National Aniline and Chemical Company; W. H. Willard; F. E. Steinbach, DuPont Rayon Company;. H. E. Whitaker, Meade Fibre Company; W. H. Teter, Meade Fibre Company; A. T. Taylor and Mrs. A. T. Taylor, Bedford Pulp and Paper Company; F. E. Bentley, Elliot Company, Richmond; R. R. Foster, Westinghouse, Philadelphia; R. W. Kraft, Westinghouse, Roanoke; R. E. Winfree, Bedford Pulp and Paper Company; Mrs. R. E. Winfree; J. S. Schumaker, Champion Fibre Company; G. M. Trostel, Champion Fibre Company and William Brydges and daughter, Bedford Pulp and Paper Company.

Flood Damage May Reach $100,000

[FROM OUR REGULAR CORRESPONDENT]

DAYTON, Ohio, April 2, 1929.—Though it may be impossible to establish the exact damage entailed by the river flood at Harriman, Tenn., last week to the plant of the Mead Paper Board Company, it is believed it will be $75,000 to $100,000.

W. J. Zimmerman, chief engineer of the Dayton company in charge of construction, reported to the local concern by telegraph soon after viewing the plant when the waters were receding and he said it would be impossible to give an accurate estimate until many features had been gone over.

The plant, of steel, concrete and brick construction, is being erected at a cost of $1,000,000, approximately, and the work had progressed to the point where it was expected the mill would be in operation by June 1. Whether the flood will delay the opening cannot be stated though it seems scarcely within the realm of physical possibility to straighten out after a devastating flood. Only a few days' production will be lost, it is stated.

Mr. Zimmerman in his message said the waters were receding and that men were at work removing mud and debris from the plant and equipment. Mr. Zimmerman, who remained at Harriman for a week, was accompanied by R. J. King and Ray Smith of the Mead Company of this city. The latter two also will remain in Harriman and in the flood zone until a check-up on the watersoaked machinery and the 15,000 tons of woodstock that was reported to have floated away, or partly so at least, is made. Most of the wood stock was recovered.

Mr. Zimmerman after taking careful steps to protect the remaining machinery, will return to this city to submit a program of repair and replacement to the Board of Directors.

The plant was about 75 per cent completed when the Emory riverbank broke, permitting a vast amount of water to flood the town and its industries of which the new Mead Paper Board mill was the largest. The mill will make board from chestnut chips after the tannery process is completed and will supply Miami Valley and other firms.

When word was first received Saturday, March 23, that the river bank had burst, an airplane was sent from the Johnson flying fields north of Dayton to Tenenssee and a preliminary survey was made from the air for the local company, thus enabling more rapid work on the part of representatives who went to Harriman Monday.

The Foreman's Part in Safety

"The success of our accident prevention campaigns always has been and always will be chiefly dependent upon the support given them by the foremen," according to Cyrus McCormick, Jr.

"The Foreman's Part in Safety," the fourth of a series of Industrial Safety leaflets issued by the Policyholders Service Bureau of the Metropolitan Life Insurance Company is definitely in accord with Mr. McCormick's statement.

This publication emphasizes the need for safety supervision in industry and presents methods of encouraging and sustaining interest of foremen in the project.

Placement of workers and employees' training, according to this publication, have a definite influence on the accident rates in individual industrial concerns. A copy of this study and the three previous leaflets in the series can be had upon application to the Policyholders Service Bureau, Metropolitan Life Insurance Company, 1 Madison avenue, New York City.

To Make Gummed Paper at Scranton

[FROM OUR REGULAR CORRESPONDENT]

SCRANTON, Pa., April 1, 1929.—The Federal Gum and Coated Paper Company has leased a property near the D., L. & W. railroad in Clarks Summit and will soon start the manufacture of gum and glaze-coated papers there. From forty to fifty men will be employed by the concern.

It is expected that the plant will be in operation by May 1. The company located in Clarks Summit following negotiations with Frank J. Hoffman, realtor, of 218 Miller building.

Wisconsin Carton Co. Leases Old Tractor Plant

New Organization Plans to Install Carton Machinery and Color Presses In Building and Grounds Formerly Occupied By Trenam Tractor Co., At Stevens Point—L. R. Anderson Purchases Interest In Company and Becomes Director and Secretary-Treasurer

[FROM OUR REGULAR CORRESPONDENT]

APPLETON, Wis., April 1, 1929.—Abandoning its plans to build a plant at Neenah, Wis., the Wisconsin Carton Company has leased the grounds and buildings of the Trenam Tractor Company at Stevens Point, Wis., and expects to install machinery and begin production in a short time.

These arrangements followed negotiations carried on last week with stockholders of the tractor company who desired to dispose of the plant. The lease runs for three years, with the privilege of renewal for a total period of fifteen years.

Some months have been spent by the company in organizing to the point where a plant actually could be established. After the corporation was formed at Neenah, Wis., the factory site was obtained where the Valley Paper Mills intended to build. A new factory was to be built for the carton industry at this place, but offers of buildings already erected led the company to reconsider.

Carton machinery and color presses for labels will be installed. A committee was appointed to make the purchases. The payroll at first will have 38 persons.

Some changes have also been made in the official personnel. L. R. Anderson, a business man of Stevens Point, has purchased an interest in the company, and becomes a director and secretary-treasurer. He will devote full time to the company beginning at once. James Mader, of Neenah, Wis., is vice president and has been made production manager. He was one of those instrumental in founding the company, and is experienced in the carton industry. The president of the company is B. C. Koepke, of Appleton, Wis., prominent contractor. Considerable assistance in the negotiations was given by E. A. Oberweiser, secretary-manager of the Whiting-Plover Paper Company, of Stevens Point. He is president of the city council and interested in the industrial development of his city.

Kimberly-Clark Buys Lakeview Mill

Sale of the Lakeview Paper Company mill at Neenah, Wis., to the Kimberly-Clark Corporation, Neenah, was announced last week. Just what use the latter will make of the mill has not been announced. It is a two machine plant with a daily capacity of 45 tons.

This mill was owned and operated until about a month ago by Sears, Roebuck & Co., Chicago mail order house, for the production of catalog paper. It was sold by them to the Fraser interests of Canada, when the latter was awarded a large paper contract by the mail order concern, one stipulation being that they buy the mill. It was said at the time of purchase that the Fraser group was not contemplating operation of the mill but would place it on the market.

The Lakeview mill is located some distance from the other mills of the Kimberly-Clark Corporation in Neenah. It has been idle since the previous sale was consummated.

Northern Paper Mills Expansion

Excavation has been started for the new three story addition to the Northern Paper Mills, Green Bay, Wis. It will be 70 by 204 feet in size and will be of concrete, brick and steel. This is part of the $500,000 expansion program in progress at the Northern mills, which includes installation of a new paper machine being built by the Beloit Iron Works.

On the first floor of the new building will be the timekeeper's office, waiting room, employment office and hospital rooms. The second floor will house the offices of the purchasing agent, mill manager, plant engineer, enginering department, chemist's department, and a lavatory. The rear portion of the first floor will be given over to a machine, pipe and electric shop. The remainder of the second floor will be used for pulp storage. On the third floor there will be tanks for "slush pulp." Need of additional storage space was the main reason for the new building. It will be completed about July 1. The work is being done by the company with day labor. H. W. Gochnauer, chief engineer, is in charge.

Moloch Foundry Officers Re-Elected

Officers and directors of the Moloch Foundry and Machine Company, of Kaukauna, Wis., were re-elected at the annual meeting of stockholders last week. The report of R. M. Kanik, president, showed the concern to be in a flourishing condition, with much new business obtained during the last year. Other officers and directors are: Dr. C. D. Boyd, vice president; Hugo Weifenbach, secretary; Joseph J. Jansen, treasurer; C. E. Raught, Julius J. Martens, H. S. Cooke, Charles Jacobson and L. F. Nelson, directors.

Sulphite Pulping Course

Eleven companies were represented at the ten-day course in sulphite pulping beginning March 25 at the United States Forest Products Laboratory, Madison, Wis. The maximum enrollment is fifteen. A second course is to be given April 29 to May 9, according to Director C. P. Winslow, with fifteen as the enrollment set. The roster of companies and representatives was as follows: Champion Fibre Company, Canton, N. J., R. J. Sprang; Consolidated Water Power and Paper Company, Wisconsin Rapids, Wis., Russell LeRoux; Continental Paper & Bag Mills Corporation, New York City, J. D. Miller (York Haven, Pa. mill), Anton Pesch (Oconto Falls, Wis. mill); Detroit Sulphite Pulp and Paper Company, Detroit, Mich., George Ganton; International Paper Company, New York City, H. J. Stilp (Piercefield, N. Y. mill), A. B. Copping (Corner Brook, Newfoundland mill), F. R. Hyatt (Berlin, N. H. mill); Minnesota and Ontario Power Company, International Falls, Minn., P. C. Ashley (International Falls mill), George Magee (Kenora Paper mill, Kenora, Ont.); Port Alfred Pulp and Paper Corporation, Port Alfred, Canada, E. Durand; Price Bros. & Co., Ltd., Quebec, D. L. McLeod; Howard Smith Paper Mills, Ltd., Cornwall, Ont., Thomas Stafford; Stebbins Engineering and Manufacturing Company, Watertown, N. Y., Murray H. Bennett; Wausau Paper Mills Company, Brokaw, Wis., Andrew Weir.

News of the Industry

Under a plan adopted by the Consolidated Water Power and Paper Company, Wisconsin Rapids, Wis., employees will receive approximately one-third of their regular wages during shutdown periods at the mill. This is in accordance with an agreement reached between the company and the three central labor unions with which it deals. Fear of unemployment is minimized by this arrangement, as idle employees will receive enough to provide for their families until work resumes. The company announces that this is not yet a permanent program.

A safety record that has created much commendation was the completion on March 6, 1929, of one calendar year without a lost time accident in the wood yard of the Kimberly-Clark Corporation's large mill at Kimberly, Wis. This department is one of changing labor and plenty of hazards, and a perfect safety record never has been achieved before. Thirty-eight men who figured in this accomplishment were favored with checks of five dollars each by the company.

Voluntary payment of $7,000 was made last week by the Thilmany Pulp and Paper Company, Kaukauna, Wis., to the widow of Henry Van Larhoven, of Kimberly, Wis. Her husband was fatally

injured recently when hit by a truck owned by the company and driven by Joseph Conrad. Two small children survive beside the widow.

Through an innovation introduced by A. E. Cofrin, president, employees of the Fort Howard Paper Company, Green Bay, Wis., will work hereafter to the accompaniment of radio entertainment. A radio receiver has been installed in the commissary and loud speakers have been placed in the office, the napkin department, the boiler room, paper machine room, machine shop and the finishing room, and one is placed so it sounds out of doors.

Mr. Cofrin believes that the workmen will benefit by the musical programs when they are not fully occupied at the machines, and that the entertainment will be of help during the night hours. The lunch hours also will be utilized for programs. The speakers in the office and the machine shop will not be used during working hours. The apparatus is so arranged that messages may be transmitted from the office to all departments via the speakers.

Members of the Wisconsin Daily Newspaper League and the Wisconsin Associated Press were guests at a dinner at Madison, Wis., last week, given by the Consolidated Water Power and Paper Company, of Wisconsin Rapids, Wis. About fifty men were present. Walter J. Mead, of the Consolidated Company, acted as chairman. The speaker was Governor Walter J. Kohler, prominent Wisconsin manufacturer of plumbing fixtures. He discussed the program of legislation he hopes to bring about.

Announcement is made of the death of John Lowe, former secretary and superintendent of the Appleton Coated Paper Company, Appleton, Wis. He was living in retirement at Phoenix, Ariz., at the time of his death. Mr. Lowe came to America from England in 1893 and was employed by the Kimberly-Clark Corporation until 1900. He held positions with the Wisconsin Traction, Light, Heat and Power Company, and the Charles S. Boyd Paper Company of Kaukauna, Wis., and became associated with the Appleton Coated Paper Company in 1917. He resigned in 1924 because of ill health.

American Envelope Co. Offers Stock

DAYTON, Ohio, April 2, 1929.—The Huffman Company of this city is offering $237,600 American Envelope Company's 7 per cent cumulative preferred stock. The Dayton Savings and Trust Company is both transfer agent and registrar.

A letter from the president of the American Envelope Company, whose plant is located at West Carrollton, a short distance south of Dayton, summarizes the situation. The offering is not made on behalf of the company and does not represent any new financing.

The president's summarization traces the history of the company which was incorporated under the laws of West Virginia in 1896 and operated under this charter until 1906, when the present corporation was formed under the laws of Ohio.

The company is engaged in the manufacture of envelopes for commercial purposes and has probably the largest independent manufacturing plant in the country at West Carrollton, with a production of 7 to 7½ million envelopes per day. Approximately 325 persons are employed at the plant and in the company's box factory in Miamisburg, several miles south of West Carrollton, where all of the boxes are made in which the envelopes are packed.

The Miamisburg Paper Company, the entire capital stock of which is owned by the American Envelope Company, is a modern paper mill located in Miamisburg, at which is manufactured most of the white paper the company requires. About 70 per cent of the tonnage of the mill is consumed by the American Envelope Company, and the balance is sold through commercial channels.

President Smith shows that the earnings in 1928 amounted to $332,436.09 for the envelope plant and paper mill, after depreciation but before Federal taxes. Earnings in other years were: 1924, $210,327.35; 1925, $248,214.61; 1926, $293,097.11; 1927, $278,217.99; with a substantial increase to more than $332,400 last year. The five-year average earnings were $272,458.63, or 8.85 times preferred dividend requirements of $34,692 per annum. The assets are shown to be $592,192.27 as against current liabilities of $85,712.49, or a ratio of 6.9 to 1.

AIRPLANE VIEW OF PLANT OF THE POWELL RIVER CO., POWELL RIVER, B. C.

Paper Demand Fairly Satisfactory in Chicago

Spirited Spring Buying Anticipated of Practically All Standard Grades of Paper—With News Print Situation Clarified Normal Conditions Now Prevail In That Industry—Book Paper Lines Show Great Improvement—Fine Paper Market Steadier

[FROM OUR REGULAR CORRESPONDENT]

CHICAGO, Ill., April 1, 1929.—The week before Easter was sufficiently busy for Chicago paper merchants to permit them to hazard a guess that spring buying of practically all lines of paper was going to be sufficiently spirited to please practically everybody. The price of news print definitely settled, the situation in this field has clarified and a normal condition prevails—one that is very much more likely to prove profitable than that which provided the upset and changeable actions of a few weeks ago.

Business in the book paper lines has improved so noticeably and so satisfactorily that production is said to be surpassed by demand providing the rumor that book prices may be slightly advanced according to reports. The fine paper market is very strong and likely to improve as Spring wears along. Fine paper merchants in the Chicago district are putting out some excellent sales efforts and are in a position to become more strongly entrenched than they were twelve months ago.

Wrapping paper is, of course, in good shape, with prices firm and southern kraft reported at stronger figures. Tissues are good while the board market is in fair shape as far as demand goes with the price situation not yet entirely cleared up according to reports. All in all, the month of April is expected to prove satisfactory to Chicago paper merchants.

A. S. Allen Addresses Chicago Salesmen

One hundred and twenty-five salesmen, paper executives and representatives of allied fields practically filled the rooms reserved by the Salesmens Association of the Paper Industry, at the Hamilton Club, Chicago, on Monday noon, March 25, to hear Arthur S. Allen, chairman of the committee on the Standardization of Process Colors. Mr. Allen clearly and concisely outlined the work of that committee, the reception it had received in allied industries and the plans for the future. The address was exceptionally well given and those in attendance got a real insight into some important work that is going rapidly ahead for the benefit of the paper, printing and publishing fields in general.

H. R. Knott, of the Eastern Manufacturing Company, president of the local division, which is to be complimented on its interesting programs, announced programs for the coming three weeks. On April 2 Phil Howard, of the Howard Publishing Company, is going to take the after lunch hour to discuss the interesting subject of "Making Paper the Buyword of America." O. R. Schulz, vice president of the Neogravure Company is the headliner on the program for Monday, April 9, at which time he will discuss rotogravure, an important process in this modern age.

To attract a large audience April 15 the Salesmens Association has secured G. E. Mosson of the United States Forest Products Laboratories, Madison, Wisconsin, who will trace the recent developments in the paper industry including the much discussed subject of cornstalk paper.

News of the Trade

The Northern Bank Note Company, 2340 North Racine avenue, Chicago, is now supplying letterheads for commercial and bank use and deposit tickets, lithographed on cornstalk paper. A printed flap or fly leaf is attached to the forms which gives a brief story of the discovery and development of the process of making pulp from cornstalks. The words "this is cornstalk paper" are also printed on the forms.

The Chicago Paper Company, Paper Mills Company and the Swigart Paper Company, all of Chicago, and all representatives of the S. D. Warren line of Standard Printing Papers, are reaping the advantages of the newest piece of Warren advertising which has recently reached Chicago printing and advertising offices. The direct mail piece is a large broadside, black and white, picturing a striking industrial scene and printed on New England Machine Book, a paper specially prepared for inexpensive mass production printing.

The Committee for Advertising Lithography has made a hit in the Chicago paper market with its newest piece of advertising literature describing the process of lithography. The advertising is built around some of the successful sales efforts of the National Biscuit Company, the four page broadside portraying, in colors, actual illustrations used by that company in its selling campaigns. The title is interesting enough—"Tasty reproductions in exact colors increase sales."

Attention is called to "Legion Bond," a rag content paper suitable for general use, made by the Whiting Paper Company, and distributed through its Chicago offices at 318 West Washington street. Legion Bond is stocked at the Chicago warehouse in white and five colors, blue, buff, canary, Golden Rod and pink.

"Aristo Halftone," distributed by Bradner Smith & Co., 333 South Des Plaines street, Chicago, is reported to be a marvelously close approach in an S. & S. C. to an enameled book paper, offering a high printing surface good for fine halftones and giving the added advantage of good folding. Its opacity is also worth calling attention to.

A welcome visitor to Chicago this week was Paul Joslin, assistant mill manager of the Flambeau Paper Company, of Park Falls, Wisconsin. Mr. Joslin was in Chicago the entire week, partly on business and partly on pleasure bent, winding up his week's visit by attending the Walker-Loughran embroglio at the new Chicago Stadium on Thursday evening.

Alexander Brothers, Inc., makers of leather belting, etc., with general offices at 14 South street, Philadelphia, announce the removal of their Chicago branch to 162-166 North Clinton street, Chicago, effective May 1.

Boston Paper Trade Happenings

[FROM OUR REGULAR CORRESPONDENT]

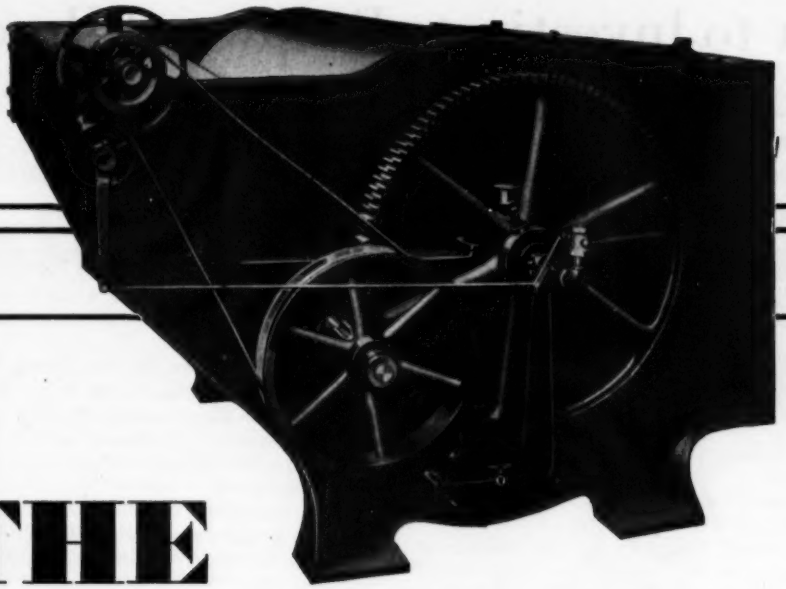
BOSTON, Mass., April 1, 1929.—At a meeting of the executive committee of the New England Paper Merchants Association on Thursday, Matthew O. Byrne, of Whitney Bros., Inc., was elected as a delegate from that association to the National Paper Trade Association of the United States, as a successor to Arthur W. Blackman, of the D. F. Munroe Company, who has been elected vice-president of the National Association.

Towards one thousand, including prominent printers, publishers and stationers, responded to the invitation of the Carter Rice & Co. Corporation to visit their new offices at 250 Devonshire street, Wednesday, when the customers' room, recently finished, was thrown open to all. Refreshments were served in this room and the guests were conducted through the building, including the stock rooms, manufacturing department and shipping rooms. The offices were attractively decorated with flowers. The event was regarded as highly successful.

A sales meeting of the Carter Rice & Co. Corporation is to be held about the middle of this month when a representative of the Hammermill Paper Company will give a sales talk on papers manufactured by that concern.

Rutter & McNaught, Inc., have just issued their April price list for jobs and seconds on coated book.

The T. C. Greene Paper Company reports a very good business on book paper.



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Let us give you the facts.

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BIRD MACHINE COMPANY
South Walpole
Massachusetts

Canada to Investigate Pulpwood Resources

Dominion Wide Conference of Provincial Representatives and Experts Will Probably Meet In June to Discover What Timber Is At Present Standing in Country—Forest Survey Would Show Relative Importance of Forest Re-Planting Compared With Forest Protection

[FROM OUR REGULAR CORRESPONDENT]

TORONTO, Ont., April 1, 1929.—For the primary purpose of discovering exactly what pulpwood resources are at present standing in Canada, and to determine the extent of inroads made upon them during the past few years by the rapidly expanding pulp and paper industry, a Dominion-wide conference of provincial representatives and experts with men of the Federal Forestry Branch will meet in all probability in June next. The conference, it is anticipated, will give statistical information which will show how long, at the present rate of consumption, the pulpwood forests of Canada will remain, or whether or not they will reproduce themselves with sufficient rapidity to make the supply of pulp material inexhaustible. Announcement to this effect was made this week by the Forest Branch of the Dominion Department of the Interior. Officials of the Forestry Branch, discussing the pulp situation as it exists in Canada today, stated that the proposed forest survey would show, to a close approximation, what natural reproduction and scientific culture is doing to retain Canada's timber wealth, and the relative importance of forest replanting as compared with forest protection. Experts of the department stated that Forestry Branch field men planted over 5,000,000 new trees annually. This was a mere "drop in the bucket," they said. To really achieve any progress in reforestation it would be necessary to allow for the growth of 5,000,000,000 new trees every year. The simpler expedient, they believe, is to allow the natural reproduction to take its course and to protect by every means known to modern science the new growth throughout the provinces.

Backus On News Print Industry

The Minnesota and Ontario Paper Company and its subsidiaries, which operates plants at Fort Frances, Ont., and across the border at International Falls, Minn., in the fiscal year ending December 31, 1928, showed net profits before preferred dividends of $2,142,687. After preferred dividends and a liberal provision for depreciation on plant, inventories and extraordinary contingencies there was an increase in the surplus account of $1,917,327. Cash and Victory bonds, which a year ago amounted to $1,641,460, are now down to $1,641,460. Current assets stand at $13,732,444 as against current liabilities of $2,607,052, which indicates a working capital of over $11,000,000. The ratio between these two features in the report is a little better than 5 to 1. E. W. Backus, in his report to the shareholders, says that, early in 1928, the general news print industry found itself confronted with a large overproduction. This brought about lower prices and some cancellation of contracts, which curtailed the output of the company to about 70 per cent of capacity. Obviously these reduced net earnings to a very substantial extent, as news print represents the major portion of volume at the plants. "The news print industry," added Mr. Backus, "is now being stabilized through the efforts of some of the Canadian Prime Ministers, and from now on we may look for a steady improvement in conditions, justifying the optimism we feel for the future."

Paper Products Industries Thrive

The output of miscellaneous paper products in Canada for the past year showed a substantial increase in all groups. This group of industries include those manufacturing paper boxes, building and roofing papers, stationery and envelopes, wallpaper and other paper products. The value of paper boxes and bags manufactured shows an increase of approximately $3,000,000. The total value of the output of this group was $18,303,127. Building and roofing paper products were valued at $5,573,770, an increase of nearly $1,000,000 over the previous year. The value of stationery and envelopes manufactured shows the smallest gain of the group, with an increase of only $16,000 and a total of $5,738,324. Wall paper products were valued at $3,738,737, an increase of some $58,000. The last group of industries in which is included all other paper products, had a total output valued at $7,196,268, a gain of about $2,700,000.

Paper Box Makers Among Creditors

On the petition of the Telfer Paper Box Company and the Dominion Paper Box Company, Toronto, the Registrar in Bankruptcy at Osgoode Hall, granted receivership orders against the Dominion Dry Cells, Ltd., and the Dominion Battery Company, of 20 Trinity street, Toronto. The Trusts and Guarantee Company were appointed custodian and stock in trade is valued at $60,000. Among the unsecured creditors are listed the Corrugated Paper Box Company, the Dominion Paper Box Company, the Firstbrook Box Company, Speer Carbon Company, Telfer Paper Box Company, of Toronto. Claim of the Telfer Paper Box Company is $9,000 and the Dominion Paper Box Company, $2,700.

Hopes to Help Pulp Industry

At no period in its history has Ontario been visited by so many tourists and visitors, states the annual report of the Minister of Lands and Forests for the province, which was tabled in the Legislature a few days ago. The report commented on the instability of the pulp and paper situation. Leaders in the trade have had numerous conferences and negotiations so far are reported to justify confidence in their ability to adjust differences and to place this great industry on a firm foundation. Its great importance warrants the Crown in providing legislative machinery to insure the gathering of detailed data and the adoption of plans towards stabilization. With this end in view, a bill for submission to the Legislature at the next sitting is being drafted. Under settlement of Great War veterans in pulpwood sections the report points out that the result has not been gratifying and generally speaking the "get back to the land" spirit is absent. An indication of this is evident from figures of the past year. In 1927, while 67 took advantage of so acquiring land, 57 abandoned their holdings, which were cancelled. In 1926, 45 were located and a like number cancelled. Total number of forest fires last year was 536 and the total area burned was 100,383 acres, of which 51,750 acres were beyond the reach of the present organization. Twenty-six steel look-out towers and 400 miles of telephone lines were erected.

Notes and Jottings of the Trade

Dusting of large areas of Ontario forest land by aeroplanes will be carried out under the direction of the Department of National Defense this year, and for this purpose the department has ordered a new Ford tri-motor hydroplane. The ravages of the spruce budworm having been checked to a material extent by the process in Nova Scotia, the zone of operations will now be extended to Ontario.

Several Toronto and Montreal contracting firms are figuring on construction of a proposed sulphite plant at Baie des Chaleurs, near Edmunston, N. B., which is to be erected for the Fraser Companies, Ltd., head operating offices, Edmunston, N. B. Plans are by the company's engineer, F. A. White, of Edmunston.

Provincial Paper, Ltd., head office Toronto, has sent out a very artistic folder containing samples of Crevale Blotting. The blotting has a printing surface that will bring out the finest details in color and half-tone work and blotting qualities that will give long life to the blotter. Sample books are now being prepared.

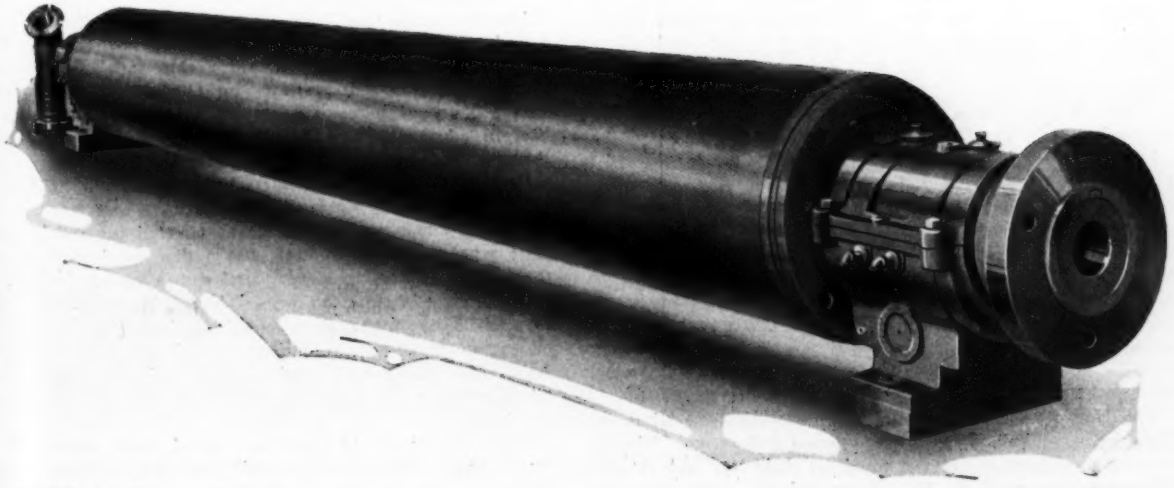
Spiral Staggered Press Roll Drilling

One of the many improvements introduced by Downingtown in the Kilberry Patent Suction Roll was the spiral-staggered drilling of the press roll shell. The advantages of this over the staggered drilling are that it increases the strength of the shell, prevents cutting or scoring of the packing and the inside surface of the shell, prolongs the life of the felt and helps to prevent the marking of the sheet.

Installations in mills making many kinds of paper prove that the Downingtown Roll meets every requirement of the industry today, and as new problems arise we are prepared to solve them. Literature and a copy of our favorable Suction Roll Decision from the U. S. Court of Appeals sent on request. *Downingtown Mfg. Co., Downingtown, Pa.*

Downingtown Introduced

DOWNINGTON
KILBERRY PATENT SUCTION ROLL
D



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Bay May Be Harnessed For Hydro Power

Gigantic Project to be Considered by Miscellaneous Private Bills Committee of Canadian House of Commons Shortly—Proposed Development Will Also Receive Consideration by International Joint Commission—Scott Paper Co. to Erect New Mill

[FROM OUR REGULAR CORRESPONDENT]

MONTREAL, Que., April 1, 1929.—The gigantic project for harnessing the tides on the Bay of Fundy for hydro power will again be considered by the Miscellaneous Private Bills Committee of the Canadian House of Commons on April 11.

The Dexter P. Cooper Company, which proposes to develop 700,000 horse power by building dams in Passamaquoddy Bay and utilizing the force of the tides, will apply for a two-year extension of time for commencing the work. The original charter granted in 1926 provided that construction should be begun within three years.

The terms of the charter also required that the Departments of Marine, Public Works and Interior should all give approval before the development was carried out.

Objections have been raised by fishing interests in the Maritimes that the alteration in the currents in the Bay of Fundy would prejudicially affect their industry. These interests will be represented when the question of extension is before the committee. Government engineers have been considering the proposal for some time, and it is expected that the committee will hear their evidence.

As the development will be partly in Canada and partly in the United States, the matter will also receive consideration by the International Joint Commission. Approval has already been given by the province of New Brunswick in a bill which provides that no power developed on the Canadian side shall be exported.

The proposal to harness tides for electric power has never before been attempted. Since the Canadian project has been outlined, consideration is also being given to a similar scheme in England on the River Severn.

Another Paper Plant for Nova Scotia

The Scott Paper Company, which operates a mill near Charleston, Queen's County, N. S., has decided to erect a second mill at Mill Village on the Medway River, eight miles from Liverpool, N. S. According to A. W. Broughton, manager of the mill, while the new mill will not be a major plant it will be a great help to that section of the Province.

The Scott Paper Company is a concern with headquarters at Chester, Pa., and the mill it operates at Charleston is that of the Nova Scotia Wood Pulp and Paper Company, Ltd. The mill has a capacity of 36,000 lbs. of dry ground wood per 24 hours.

Settlers' Pulpwood

A discussion took place during the week in the Quebec Legislature regarding the hardships of the settlers in the Abitibi district who were not allowed to export the pulpwood cut on their lands. Hector Authier, the member for the district, said Canadian paper and pulp manufacturers would not purchase their wood and they were often obliged to burn the wood which they could not dispose of. He suggested that export of pulpwood might be allowed in certain cases.

The Hon. Honore Mercier, Minister of Lands and Forests, replying to the member for Abitibi, admitted the situation was an unfortunate one. He thought the solution of the trouble might be found in the establishment of a mill in that district but unfortunately the recent crisis in the pulp and paper industry gave very little hope of settling the difficulty in that manner. He expressed the hope that conditions would improve and that Canadian manufacturers might be induced to assist the settlers and the government by purchasing the wood cut by the settlers.

The Hon. J. E. Perrault, Minister of Colonization, Mines and Fisheries also admitted the situation was a serious one. The settlers were obliged to cut the wood on their lots and yet they could not dispose of it. He too was of the opinion Canadian manufacturers might help by purchasing the pulp wood cut by settlers. He did not believe it would be possible to allow a certain class of people to export pulpwood to the United States.

Port Alfred Corp. Report

The fifth annual report of the Port Alfred Pulp and Paper Corporation for the year ending December 31 last shows earnings equal to $2.15 a share and available for common dividends and income tax.

The year's operations resulted in gross profit of $1,929,536, which compares with $2,266,365 for the previous year. After deduction of bond, bank and other interest, totalling $818,376, there remained $1,111,160 available for depreciation and depletion reserves and preferred share dividends. Provision for depreciation and depletion totalled $432,898, and preferred share dividends amounted to $420,000, leaving a surplus of $258,262.

In his report to shareholders, George M. McKee, president of the corporation, comments upon the news print situation as follows:

"Owing to over-production and unsatisfactory market conditions in the news print industry, the mills have been operated on a much restricted output and full operation cannot be expected until consumption and production are more nearly balanced. The mills and property of the corporation have been maintained in a high state of efficiency and are in position to take advantage of maximum operations when conditions warrant."

Boston Paper Market Active

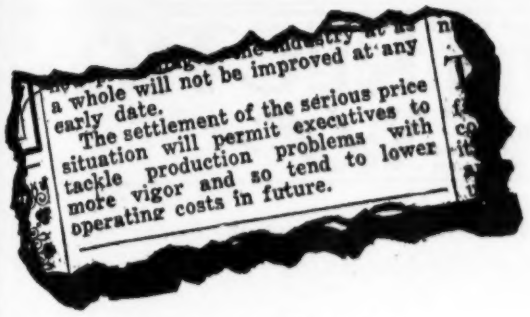
[FROM OUR REGULAR CORRESPONDENT]

BOSTON, Mass., April 1, 1929.—March has run true to form as one of the best months of the year in the paper business, and in fact generally favorable reports are heard for the first quarter of the year in fine paper. Several factors contribute towards swelling the volume of March orders. Automobile companies have been and are issuing a large quantity of direct mail advertising. Retailers have been blazoning their spring wares and Easter goods. In fact, every industry to which the season brings more activity influences the current consumption of paper. Then, too, on account of drops in the stock market, brokers have been advertising more extensively, starting in immediately after the first break in stocks. Book paper is steady. Not only fine paper, but coarse as well, has been in satisfactory demand.

Rumors persist that board prices are to be marked up in the near future. Current quotations continue at about the same levels, with $35 as the minimum price for chip and $37.50 asked by some. The lowest current price for filled news board is $37.50, with $40 quoted in some quarters. It is said that values are likely to advance in New York before they do in Boston, because they are lower in that city at the present time.

Paper stock has been showing a little weakness. The supply of old papers has been coming into this market very fast and some of the mills have withdrawn, having covered for at least immediate requirements. Old kraft has a downward tendency, with the price at 1.80 or lower, compared with a range of 1.85 to 1.90 which prevailed before the drop. The maximum price for mixed papers is .55, against previous quotations of .55 to .57½. Old newspapers are quotable at .55 to .60, compared with a former range of .60 to .65. Manila rope continues firm and advancing, with the minimum price for foreign stock now at 4.25 and that for domestic at 4.50.

Better grades of old rags have moved freely during the last month, so that Boston is rather well "cleaned up." Twos and blues are scarce. Roofing rags are showing some improvement.


a whole will not be improved at any early date.
The settlement of the serious price situation will permit executives to tackle production problems with more vigor and so tend to lower operating costs in future.

Clipping from the Financial Post March 1, 1929

Your Steam Costs Alone Can Provide A Real Source For Needed Savings

In scores of mills facing a period of unfavorable market conditions, there exists real opportunities to effect needed savings without the least impairment of operating efficiency. This should be the objective of every plant executive and superintendent.

A little closer scrutiny of heating and ventilating methods and costs is more than likely to reveal excessive steam consumption and wasted heat that daily adds to the burdensome weight of operating expense.

The Briner Economizer has been installed in the most efficient machine rooms to insure maximum economy even during periods of capacity production for active markets. How much greater is its value at this time to the mill depending upon operating costs to offset the decline in profit.

The Briner Economizer's record of savings secured through full utilization of heat in waste vapor is a known fact. Surely it is worthy of every plant executive's earnest consideration at this particular time.

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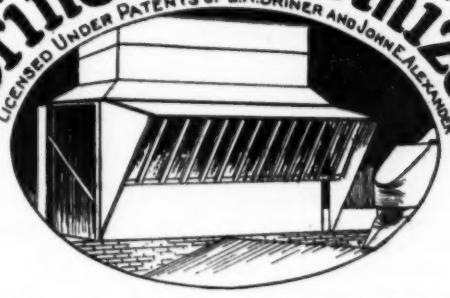

Installing Briner Economizer does not make necessary drastic alterations to your present equipment.

Investigate use of Briner Economizers in conjunction with Grinder Exhaust System.

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CONSTRUCTION NEWS

A Summary of Vital Facts Regarding Construction, Finances and Operation of Paper Mills

Construction News

Fort Wayne, Ind.—The Fisher Paper Company, Fort Wayne, has authorized plans for construction of a new building as local storage and distributing plant at Lafayette and Main streets. It will be one-story, 70 x 150 feet, and will be used largely for mechanical service, including machine shop; a garage for company cars will be operated in conjunction. It will cost about $50,000, with equipment. A. M. Strauss, Cal-Wayne Building, is architect.

Greenville, Miss.—The Paepcke Corporation, Conway Building, Chicago, Ill., affiliated with the Chicago Mill and Lumber Corporation, 111 West Washington street, same city, is perfecting plans for its proposed new wood pulp and insulating board mill at Greenville, recently referred to in these columns. The new unit is now scheduled for completion early in September; the main building will be 140 x 550 feet, and with auxiliary units will be equipped for an initial output of about 6,000,000 square feet a month. The mill will be located near the Greenville plant of the Chicago Mill and Lumber Corporation, and will use Southern hardwoods almost entirely for raw material supply. The entire project will cost well over $300,000, with equipment. The Paepcke Corporaton is capitalized at $1,500,000. George W. Powers will be in charge of production; he was formerly connected with the Insulite Corporation, Aurora, Ill. O'Neill Ryan will be director of sales, having recently resigned a position of general sales manager for the Celotex Corporation, Chicago.

Newark, N. J.—The Mono Service Company, Verona avenue and Oraton street, manufacturer of paper cups and kindred paper products, has awarded a general building contract to the Shore Construction Company, 94 Christie street, for extensions and improvements in plant, consisting of a new reinforced-concrete addition and alterations in existing structures, estimated to cost about $150,000. A portion of the new unit, it is understood, will be used for general storage and distributing service. William Clifford, Jr., 1177 East Grand street, Elizabeth, is architect.

Cloquet, Minn.—The Northwest Paper Company, Cloquet, has arranged for a general expansion and improvement program at its mill, to develop increased operating facilities. The Jacobson Engineering Company, Plymouth Building, Minneapolis, Minn., pulp and paper mill engineer, is in charge.

West Carrollton, Ohio—The American Envelope Company is running on regular production basis at its local plants, giving employment to about 325 operatives, with production schedule of about 7,000,000 envelopes a day. The box manufacturing plant at Miamisburg, Ohio, is likewise running on full operating schedule; this plant is devoted to the production of cardboard boxes for envelope packing. A subsidiary, known as the Miamisburg Paper Company, has a mill at the last noted place, and is maintaining regular schedule with full working force of about 100 operatives. Carlton W. Smith is president.

Chicago, Ill.—C. L. Barkley & Company, 655 South Wells street, manufacturer of loose-leaf paper products, has leased space in the building at 517 South Jefferson street, for a term of years, and will use it for expansion. It is understood that present plant will be removed to new location.

Green Bay, Wis.—The Fort Howard Paper Company has active work in progress on new addition to its mill, two-story, 30 x 50 feet, to be equipped as a turbine room, and superstructure will soon near completion. A number of miscellaneous contracts have been let for the work. An award for the turbine installation has been placed with the General Electric Company, Schenectady, N. Y.

Newark, N. J.—Peter J. Schweitzer, Inc., 170 Cornelison avenue, Jersey City, manufacturer of tissue papers, is reported to have acquired property on Frelinghuysen avenue, Newark, heretofore occupied in part by the Duratex Corporation, and will occupy about May 1 for general expansion.

Brooklyn, N. Y.—The Supreme Corrugated Container Corporation, recently organized to operate with capital of $25,000, by Samuel Levine, 700 Lefferts avenue, Brooklyn, and associates, is said to have plans in preparation for the early establishment of local plant for the manufacture of corrugated paper boxes, cartons and kindred specialties.

Green Bay, Wis.—The Paper Converting Machine Company, Day and North Quincy streets, is asking bids on general contract until April 10, for a new addition to its plant, to be one-story, 80 x 100 feet, steel and concrete. It will be used for increased production, and is reported to cost more than $40,000, with machinery.

Cleveland, Ohio—The Dobeckmun Company, manufacturer of special paper-working equipment, has leased space in the building at 1311 West Eightieth street, and will occupy for a new works; the property aggregates about 12,000 square feet of floor space. At the present time the company is giving particular attention to new uses for cellophane, a transparent wrapping material produced by the DuPont Cellophane Company, River Road, Buffalo, N. Y., which has plans in progress for a large new mill at Old Hickory, near Nashville, Va., to cost in excess of $1,500,000. A late development of the DoBeckmum Company is equipment for making cellophane of moisture-proof character into containers of various kinds.

Mobile, Ala.—The International Paper Company, New York, has active work in progress on its new mill at Mobile, designed for the production of kraft paper stocks, and which will be equipped for an initial output of about 175 tons per day. Completion is scheduled in July or August, when immediate production will be inaugurated. The entire project is reported to cost more than $3,500,000.

Coatesville, Pa.—The Coatesville Paper Mills, Inc., recently formed by George D. Kilberry, Downingtown, Pa., and associates, with capital of $150,000, is said to be planning early operation of local mill for manufacture of a line of paper goods. Tuley L. Peterson, Coatesville, will also be identified with the new organization.

Bogalusa, La.—The Bogalusa Paper Company is running at full capacity at local mill with average output of about 50 tons of kraft paper a day. Full working force is employed. Production will be maintained on present schedule for an indefinite period. The plant also has a monthly output of more than 4,000 tons of sulphate pulp and is holding to that basis.

TECHNICAL BOOKS

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The PAPER *and* PULP INDUSTRIES

CLASSIFICATIONS AND DEFINITIONS OF PAPER

REVISED EDITION, 1928

by Clarence J. West

Prepared under the auspices of a committee appointed by the American Paper and Pulp Association. The definitions in this book are offered as those generally accepted by the trade. In the preparation of these definitions the committee has made use of all available published data and of the many suggestions received from the industry and trade, through the various sectional committees.

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W. H. Munsson

The papers which constitute this book appeared originally in the trade and technological journals as current reports of the progress of investigations under way at the United States Forest Products Laboratory for a period of about six years beginning with 1921. This information is the accumulation of years of experience. The method by which sulphite with the desired properties is to be made, the conditions under which it must be cooked, the strength of acid to be used, the equipment, operation and materials are all fully covered in this book.

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The paper making materials have been listed in dictionary style under the common and botanical names, the references being given only under the latter.
Books and articles are listed under the author (or title) in the dictionary arrangement, and to refer, under each material, to the author, and the year of publication.
This list includes all the woods tested at the Forest Products Laboratory, as well as many tested by the Imperial Institute of Great Britain and by other workers.

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Method of procedure for adoption of official paper testing methods by the Technical Association of the Pulp and Paper Industry. The work on standardization of paper testing methods is divided as follows: Microscopical, Physical, Chemical, Optical, Tests for Special Uses of Paper.
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Halden, Norway—The Saugbruksforeningen, Halden, Operating a local mill for the production of writing papers, has an expansion and improvement program under way, including installation of new equipment, both in the pulp and finished paper-making divisions. The first noted will provide for an increase of about 8,000 tons per year of bleached sulphate pulp, and a new paper-making machine and auxiliary equipment will handle this enlarged output. The Kellner Partington Paper & Pulp Company, with mill at this same place, will also expand its chemical pulp division, with installation of considerable new equipment.

Somerville, Mass.—Ginsburg Brothers, Inc., recently organized with a capital of $182,000, to manufacture paper boxes and containers, is said to be planning early operation of a local plant. Extensive capacity will be developed. Samuel L. Ginsburg is president, and Israel Ginsburg, 124 Longwood avenue, Brookline, Mass., treasurer and representative.

Chicago, Ill.—The Eagle Paper Box Company has arranged for a lease of its one-story building, 50 x 125 feet, at 4123-25 West Lake street, to the Wahlstrom Manufacturing Company, which will occupy for another line of manufacture. It is understood that the Eagle company will be located in another building upon vacating the premises.

New Companies, Etc.

Newark, N. J.—The Gross Paper Company has been incorporated with a capital of $75,000, to manufacture and deal in paper products. The incorporators are Max Berk and Samuel J. Kaufman, 24 Commerce street, Newark. Last noted is representative.

New York, N. Y.—The Brookside Card and Paper Company, Inc., has been incorporated with a capital of $15,000, to manufacture and deal in paper and card stocks of various kinds. The incorporators are Herman Fuchs and Irving Ebbin, 107 Clark place, Bronx, New York. Last noted will represent the company.

Sharon, Mass.—The Sharon Box Company has been incorporated with a capital of 100 shares of stock, no par value, to manufacture paper boxes and containers, etc. Charles F. Smith, 87 St. Mary's street, Brookline, Mass., is president and treasurer, and will represent the company. Louis H. Dillingham is interested in the organization.

Chicago, Ill.—The Loxet Manufacturing Company, 1757 West 95th street, has been incorporated with a capital of $35,000, to manufacture paper package products of various kinds, receptacles, etc. The incorporators are W. W. Wallace, R. S. Launder and J. L. Laycock.

New York, N. Y.—The Strand Paper Box Company has been organized with a nominal capital of $5,000, to manufacture and deal in paper boxes and containers. Isidor Engelsberg, 3321 Mermaid avenue, Brooklyn, N. Y., is principal incorporator and representative.

Chicago, Ill.—The J. A. Stubbs Box Company, 623 South Sangamon street, has been incorporated with a capital of $5,000, to manufacture and deal in paper boxes, containers, etc. The incorporators are William A. Green and A. N. McCoig.

New York, N. Y.—The Strand Paper Box Company has filed notice of incorporation, with capital of $5,000, to manufacture and deal in paper boxes and other containers. S. H. Heyert, 5 Beekman street, New York, is representative.

Chicago, Ill.—The Peerless Loose Leaf Manufacturing Company, 54 West Lake street, has been incorporated with capital of $5,000, to manufacture and deal in loose leaf papers and other stationery products. The incorporators are C. Gehant, J. G. Hamer and Nacy Peterson. The company is represented by J. G. Hamer, 33 South Clark street, Chicago.

New York, N. Y.—The Kensington Wall Paper Company has been incorporated with capital of 150 shares of stock, no par value, to manufacture and deal in wall papers, and other decorated paper products. The company is represented by Clark, Sikels & Barton, 51 East 42nd street, New York.

Queensbury, N. Y.—The Tait Paper and Color Industries, Queensbury, has filed notice of change of name to the Imperial Paper and Color Corporation.

New York, N. Y.—The Brookside Card & Paper Company, has been incorporated with capital of $15,000, to manufacture and deal in card stocks, and other paper products. Max Freedman, 18 East 41st street, New York, is principal incorporator and company representative.

New York, N. Y.—The Apolo Company, Inc., 37 East 28th street, paper and other stationery products, has filed notice of increase in capital from $5,000 to $25,000, for general expansion.

Williamsport, Pa.—The United States Sand Paper Company has been designated to operate in New York State with capital of $50,000.

Dallas, Tex.—The Ware Book Cover Company, has been incorporated with capital of $3,000, to manufacture and deal in paper book stocks, covers, etc. The incorporators are W. G. Ware, P. B. Garrett and Werth Wimberly, all of Dallas.

Brooklyn, N. Y.—The Supreme Corrugated Container Corporation has been incorporated with capital of $25,000, to manufacture corrugated paper containers. David Groberg, 26 Court street, Brooklyn, is representative.

Dayton, Ohio—The Wyoming Waste Paper Company has been organized with nominal capital of 100 shares of stock, no par value, to deal in waste paper products. The company is headed by I. L. Jacobson, Thomas M. Gavin and L. Hasenstab, all of Dayton.

Middleborough, Mass.—Better Boxes, Inc., has been incorporated with capital of $50,000, to manufacture and deal in paper boxes and containers, etc. The incorporators are Fletcher Clark, D. Theron Burnett and Everett E. Ralston, Middleborough; the last noted is president.

Low Labor Turn Over Due To Research

[FROM OUR REGULAR CORRESPONDENT]

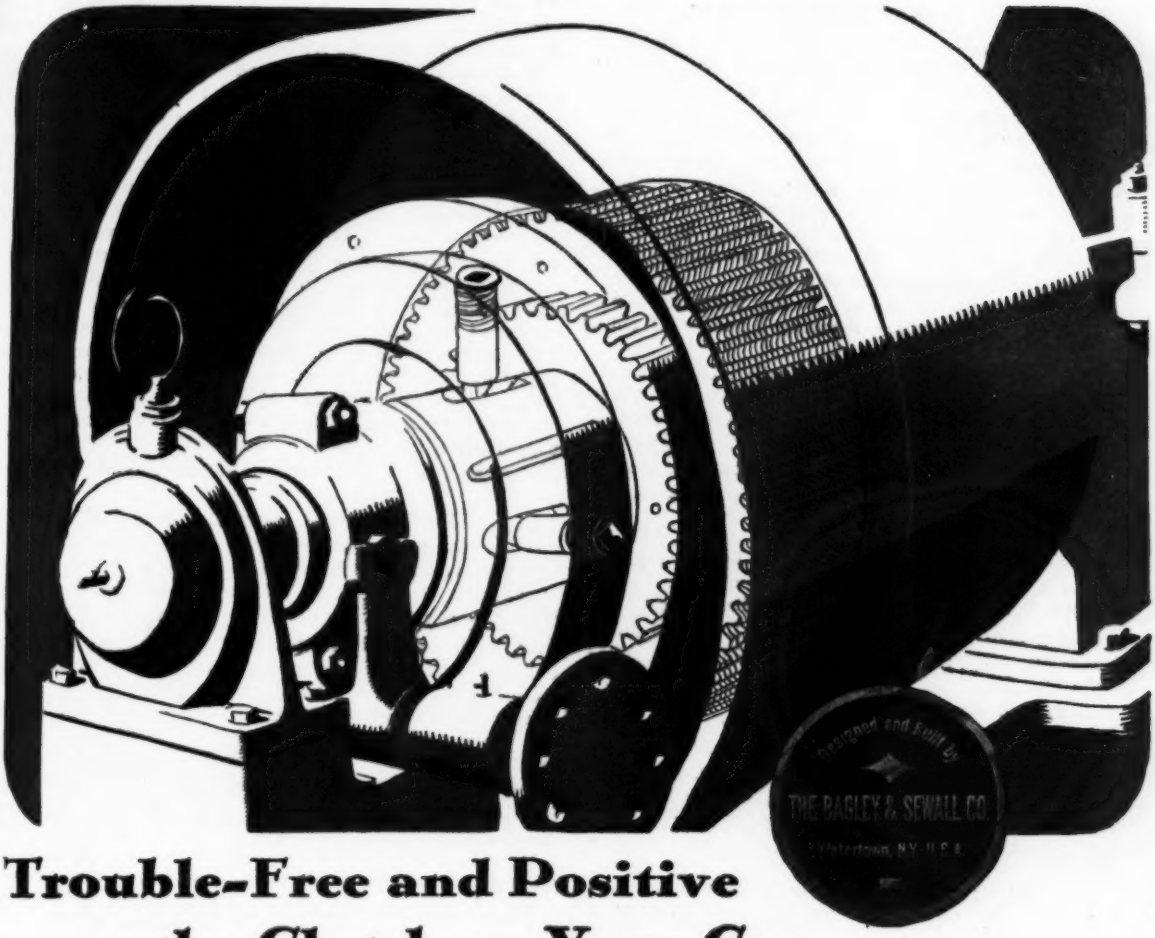
HOLYOKE, Mass., March 25, 1929—The recent bulletin issued by the New England Council is of great interest to paper manufacturers through the reports therein included of the stabilization of employment through minute investigations by their research departments as to causes of waste and personnel changes. The Strathmore Paper Company of Mittineague and Woronoco and the Crocker McElwain Company of Holyoke reported to the council substantial savings and substantial cut-down of their labor turnover.

"The study of individual earnings and proper incentives for better work is an outstanding feature of the company's work," the bulletin says of the Strathmore's experiment. "Several years ago, company research led to the belief that a detailed control of the most minute sources of waste would result in stable employment and improved business. A painstaking investigation of both production and selling methods indicated that the reduction of preventable waste must inevitably work to the benefit of the company. Shortly thereafter the plan of putting practically every worker on an individual bonus was accepted.

"The low labor turnover of the Strathmore Paper company, the officials believe, is due to the research work which covers the chemical, technical and merchandising functions of the company as well as the direct personnel field."

At the Crocker-McElwain plant the percentage of employes on full time was raised from 28.3 in 1921 to 45.5 in 1926 through research, the report shows. The average number of employes dropped from 261 to 237, but the number employed full time was raised from 74 to 108. The desire to maintain intact its organization of skilled workers motivated the research plan.

Similar experiences in other New England plants making all kinds of products are reported in the bulletin, which has been sent out to business and industrial executives in all parts of the six New England states.



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In fact, the Multiple Disc Clutch on the Bagley & Sewall Spiral Bevel Gear Drive *is the clutch of one of the world's finest cars,* developed to ultimate perfection and adapted to paper machine drive needs. "Smooth as grease," it slides in and out of engagement without the slightest hesitation or jerkiness. Its many discs, individually small in diameter and compact, but generous in total friction surface, lock positively when engaged but release instantly, completely, automatically. Heavy coil springs help maintain close contact and facilitate prompt release. The combination—Bagley & Sewall Drive and Bagley & Sewall Clutch—is a splendid tonic for sluggish machines.

There's more we'd like to tell you. Write us.

The Bagley & Sewall Co.

Watertown, N. Y.

Enrollment in First Sulphite Course

The first of two ten-day courses in sulphite pulping scheduled by the Forest Products Laboratory, at Madison, Wis., for this spring got under way Monday, March 25. Fifteen men, the maximum enrollment for the class, answered the initial roll call. Eleven companies were represented. Two of the companies had men in identical 1927 courses, one sending the same man who registered in the present class. This particular mill superintendent, a man of extensive practical experience, applied the instruction received in the previous course to good advantage, but he enrolled again with the expectation of extracting the absolute maximum of benefit from the instruction offered.

Two of the companies sending men to the March 25 course enrolled two each. One company, operating a number of mills, enrolled three men.

A second sulphite course will be given at the Forest Products Laboratory April 29 to May 9. Enrollments for this course will as usual be limited to fifteen. Ten of these enrollments have already been subscribed. Director C. P. Winslow has announced that additional enrollments, accompanied by the cooperative fee of $200 for each man enrolled, up to the maximum will be accepted in the order of receipt.

The roster of companies and representatives was as follows: Champion Fibre Company, Canton, N. C., R. J. Sprang; Consolidated Water Power and Paper Company., Wisconsin Rapids, Wis., Russell LeRoux; Continental Paper and Bag Mills Corporation, Pershing Square Building., New York City, J. D. Miller (York Haven, Pa., mill), Anton Pesch (Oconto Falls, Wis., mill); Detroit Sulphite Pulp and Paper Company., Delray Station, Detroit, Mich., Geo. Ganton; International Paper Company, 100 East 42nd street, New York City, H. J. Stilp (Piercefield, N. Y., mill), A. B. Copping (Cornerbrook, Newfoundland, mill), F. R. Hyatt (Berlin, N. H., mill); Minnesota and Ontario Power Company, International Falls, Minn., P. C., Ashley (International Falls, Minn., mill), Geo. Magee, (Kenora Paper mill, Kenora, Ont.); Port Alfred Pulp and Paper Corporation., Port Alfred, P. Q., Canada, E. Durand; Price Bros. & Co., Ltd., Quebec, Canada, D. L. McLeod (Kenogami, Que.); Howard Smith Paper Mills, Ltd., Cornwall, Ont., Canada, Thomas Stafford; Stebbins Engineering and Manufacturing Company, Watertown, N. Y., Murray H. Bennett; Wausau Paper Mills Company, Brokaw, Wis., Andrew Weir.

Paper Manufacturers and Brotherhood to Confer

ALBANY, N. Y., April 1, 1929.—A tentative schedule of conferences between representatives of the International Brotherhood of Papermakers and paper manufacturers of this country and Canada as the first step toward the signing of new wage and working agreements, where such expire on May 1, was not consummated in this city last week, owing to the inability of J. P. Burke, of Ford Edward, president of the Pulp Workers' Union, to attend as had been previously planned. However, Mr.. Burke wired to labor headquarters explaining his inability to be present and said that he would surely attend the conferences to be held this week. It is understood that there are a number of working agreements which expire on May 1 that will in all probability be renewed on or before that time. President William R. Smith, of the Brotherhood, expects to look after the interests of the organization in these meetings, and Mr. Burke will accompany him in his travels although it will probably be necessary for other officials to handle some of the conferences.

A conference farthest west will be held at International Falls, Minn., where the Minnesota and Ontario Power and Paper Company is located, while officials of the Brotherhood will also journey as far east as Woodland, Me., where the St. Croix Mill is located. The farthest point in northern territory to be touched is at Abitibi, Ont., where the Abitibi Power and Paper Company has its mills. President Smith announced that about 11,000 men would be affected by the agreements and in view of the fact the union is not asking for any wage increase he does not anticipate any trouble or controversies over the signing of the articles.

Officials of the Pulp, Sulphite and Paper Mill Workers' Union were in this city during the past week conferring with President Smith on a strike situation that exists at Fulton, N. Y., which is causing considerable concern. It was announced after the meeting that Vice President Frank P. Barry had been sent to the scene of the trouble while the state has also sent a mediator. It is alleged that fourteen men formerly employed at the Victoria Mill in that place were discharged because they joined a recently organized new local. Officials of the Brotherhood said they would fight the situation to the end although they hoped that conditions would adjust themselves so that further trouble would be averted. A portion of the past week was spent by Brotherhood officials in getting in touch with various paper manufacturing companies asking for tentative dates in connection with the signing of new wage and working agreements on and after May 1. As soon as the replies have been received from these concerns a schedule will be mapped out which will permit representatives to visit the various mills without doubling back over their tracks to any great extent.

Flood Damages Harriman Board Mill

Dayton, O. March 25, 1929.—Representatives of the Management, Engineering and Development Company, headed by W. J. Zimmerman, chief engineer, left tonight for Harriman, Tenn., to investigate the damage entailed by the overflow of the Emery river, to the newly-constructed plant of the Mead paper Board Company, under erection at that place for the conversion of chestnut chips into paper board.

It is roughly estimated that the damage amounted to $100,000, the plant having been three-fourths completed. A quantity of valuable equipment on the outside of the mill was swept away and will be a loss and 15,000 cords of wood stock were lost, it is reported. This material had been received in preparation for opening the plant not later than June 1.

Mr. Zimmerman was in Harriman until Saturday midnight when there was no indication of a flood, except that the waters were high. However, the steady volume of water dashing against the banks of the Emery river were too great a pressure on the banks which gave way in sections, resulting in a vast wall of water rushing through town.

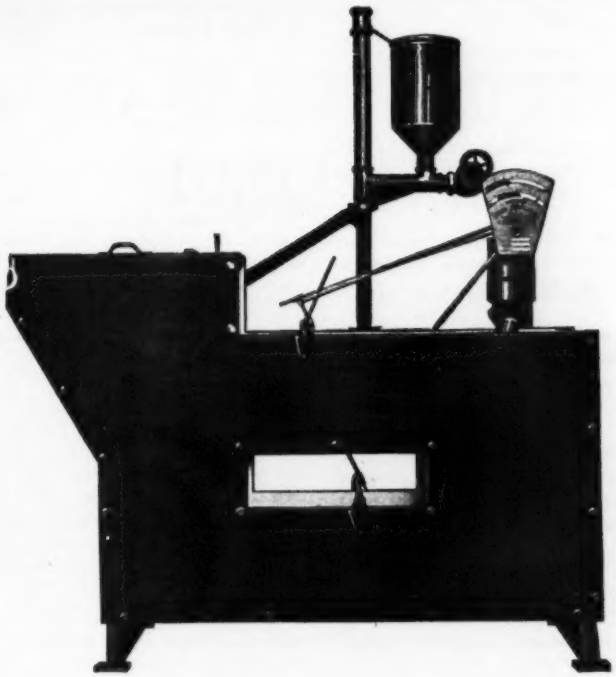
Several mill representatives who flew over the flooded district in an airplane reported the buildings still standing but covered with water. The structures, are of steel, concrete and brick construction and may not be permanently damaged. Two hundred men have been employed in construction work which was directed by the Dayton company.

Pulverized Fuel Equipment

A new bulletin on the subject of the Aero Unit System of Pulverized Fuel Firing has been issued by the Foster Wheeler Corporation, 165 Broadway, New York City. This 52 page catalog covers briefly the development and application of the unit system for firing pulverized fuel. Its chief appeal consists of a large number of illustrations showing plants equipped with Aero unit pulverizers and corresponding line drawings giving sectional elevations through the steam generating units.

The exact method of operation of the Aero pulverizer is clearly described and the various parts of the machine are shown photographically. The results of tests are included, as well as a list of industries with the names of nationally known concerns.

A student of the subject will find much of interest in this catalog, and will be able to follow the progress made in fuel pulverizing machines for the last thirty years. This bulletin is known as No. 037, and it will be furnished upon request to the Foster Wheeler Corporation.



No Operation Effort to Regulate Stock

As easily as looking at the pressure gauge, you can regulate stock density with the DeZurik Stock Consistency Regulator —regulation is automatic, instant. This is an indicator and a regulator. The DeZurik Stock Consistency Regulator indicates variation in density of the stock passing through it. The same detector which operates the indicator also operates the swinging water spout. The instant a change in consistency is indicated there is a change in the amount of water added—there is no delay, it is done instantly. It regulates without power or effort on the part of the operator. The flowing stock operates the indicators and the swinging spout. Let us tell you more about the DeZurik Stock Consistency Regulator. Details on request.

VALLEY IRON WORKS CO.

Machinery for Paper and Pulp Mills

APPLETON WISCONSIN

New York Office: 350 Madison Avenue

Western Manufacturing & Sales Division: Smith & Valley Iron Works Co., Portland, Oregon

New York Trade Jottings

Louis Calder, president of the Perkins-Goodwin Company, of 551 Fifth avenue, New York, has returned to headquarters after a month's sojourn in Florida.

* * *

Helmer De Verdier, managing director of Hellefors Bruks A/B, of Fredriksburg, Sweden, was a visitor at the TAPPI office this week.

* * *

The William G. Willmann Paper Company, Inc., paper merchants, have moved from 51 Beekman street to the building at 530-536 Canal street, which it has leased for a long period.

* * *

The International Paper Company has appointed Thomas Barrett & Son, of 402 West Broadway, New York, as one of its distributors for the water-mark papers, Adirondack Bond and Adirondack Ledger.

* * *

The Allis-Chalmers Manufacturing Company, Milwaukee, Wis., has just been elected to membership in the Supply and Equipment Section of the American Paper and Pulp Association, with headquarters at 18 East 41st street, New York.

* * *

Kit Warner, of the John F. Sarle Company, discussed general merchandising problems in the fine paper trade at the regular weekly luncheon and meeting of the New York Division of the Salesmen's Association of the Paper Industry, held last Monday at the Canadian Club, New York.

* * *

The capital stock of John C. Wiarda & Co., manufacturers, importers and exporters of chemicals, of Brooklyn, New York, has been purchased by the Kalbfleisch Corporation, of 200 Fifth avenue, New York. The business will continue to be conducted as usual under the direction of George E. Taylor.

* * *

Theodor A. Overwien, who has been studying kraft pulp manufacture in the United States for the past six months as a holder of a travelling scholarship of the Technical University of Troudjein, Norway, sailed for France from New York on Friday, March 29.

* * *

The Hoberg Paper and Fibre Company, of Green Bay, Wis., announces the appointment of Henry L. Samson as their Atlantic Coast representative. Mr. Samson's headquarters will be in Room 417, Bush Building, 130 West 42nd street. His telephone number will be Wisconsin 9800.

* * *

Gosta Diedrichs, of Ostberg & Diedrichs; Thorsen Hernod, managing director of the Munksund mill; Birger Sundfelt, also of the Munksund mill, and Ragnar Lagergren, of the Husum mill, all Swedish pulp mill representatives, who have been investigating new developments in the paper industry on the Pacific Coast, will sail for Sweden from New York on Monday, April 15.

* * *

George C. Davis, customs expert, in addressing the directors and group chairman of the National Council of American Importers and Traders, Inc., at the Hotel Astor, declared that, in his opinion, no new tariff law can go on the books before October 1. Mr. Davis had just returned from Washington when he made this statement, which he based upon first hand information. Mr. Davis was assigned to the Senate Finance Committee during the last tariff revision as a tariff expert and considerable weight is attached to his views.

* * *

The Interstate Commerce Commission has denied the petition of the National Association of Waste Material Dealers for reconsideration of the case involving the ratings on rags, waste paper, etc., less car loads, in official classification territory. It is suggested by the association that all shippers keep track of their less car load shipments to determine exactly what effect the decision will have on their business for at least an experimental period. Such information will be essential if it is decided that the effect on the waste paper and rag industry is so serious that a formal complaint becomes necessary.

* * *

The General Naval Stores Company, Inc., New York City Branch, announce the appointment of Howard Goodman, 940 Seneca street, Buffalo, New York, as their exclusive Buffalo agent. Mr. Goodman was formerly connected with the Spencer Kellogg Company, Buffalo, for a number of years as a sales manager, and because of his long experience and wide acquaintance with the trade, the General Naval Stores Company believe themselves fortunate in having Mr. Goodman as their representative in Buffalo.

* * *

Major O. M. Porter, executive secretary of the American Paper and Pulp Association, has been re-elected a director of the Swedish Chamber of Commerce of the United States of America, to serve for a term of three years. This election is not only a tribute to Mr. Porter's position in the industry, but also an indication of the useful contacts which have been established through the Chamber for pulp and paper manufacturers who have visited in the United States and the Scandinavian countries.

* * *

F. C. Teipel & Co., of 53-63 Park Row, New York, received a cable last Thursday, March 28, from the Verband Deutscher Druckpapier Fabriken, Berlin—German Newsprint Mills' Syndicate—known in this country shortly as the "Verband," that their general manager, Gustave Huebner, died suddenly that morning in consequence of a stroke and that the obsequies were to take place in the Verband House last Saturday, March 30. Mr. Huebner was well-known and respected in this country, where he had made many friends.

The Manufacture of Pulp and Paper

The Revised Edition of the Fifth Volume of "The Manufacture of Pulp and Paper" has just been published by the McGraw-Hill Book Company, New York, completing this monumental work.

This text book of modern pulp and paper mill practice was edited by J. N. Stephenson and prepared under the direction of the Joint Executive Committee on Vocational Education representing the Pulp and Paper Industry of the United States and Canada, consisting of George Carruthers, chairman, T. L. Crossley, R. S. Hatch, G. E. Williamson, and R. S. Kellogg, secretary.

The first volume of this important work was published in February, 1921; followed by Volume II in June, 1921; Volume III in April, 1922; Volume IV in January, 1925. The revised edition of Volume III was published in March, 1927; Volume IV in September, 1928; and Volume V in March, 1929.

It is of interest to note that the complete work contains 2,777 pages and while it has cost over $60,000 to publish, more than 19,000 copies have already been sold.

News of the Boston Trade

[FROM OUR REGULAR CORRESPONDENT]

BOSTON, Mass., April 1, 1929.—The name of Matthew O. Byrne, of Whitney Brothers, Inc., is to be submitted by the nominating committee as a candidate for the board of directors of the Boston Credit Men's Association, whose annual meeting is to be held April 9. The term expires in 1932.

Tileston & Hollingsworth Company is issuing samples of Milton Yellow to the trade. This paper, laid and wove, is made in two book weights, 60 and 80 pounds, size 26x40, with deckle edges the 40-inch way. Coverweight is made in wove only, 20x26—65 and 23x25—101.

ANOTHER "M & W" GOES INTO PRODUCTION WITHOUT DELAY

Quick Installation at Dexter Plant

The erection of a new paper machine is a serious business, which cannot always be handled successfully as a rush order. It usually requires anywhere from six weeks to two months to put a modern paper machine together, and get it into operation.

What is regarded as a really remarkable record was recently established at the plant of C. H. Dexter & Sons, Inc., Windsor Locks, Conn., specialists on highest grade thin papers. The problem was to remove an old machine and replace it with a larger and more modern paper machine, with the least possible loss of time and production.

At 9:30 p.m., Saturday, February 2, the old machine ceased making paper. At 3 p.m., Sunday, February 3, the old machine was all torn down and moved out. At 6 p.m. the same day excavation was begun for a new foundation. At 7 a.m., Wednesday, February 6, erection of the new machine on the new foundation was started. By 7 p.m., Saturday, February 16, paper was being regularly produced on the new machine. Elapsed time, two weeks from stop to start.

The fact that everything went through at top speed, without a single hitch and no accidents, is credited to careful planning in advance, and to the interested and intelligent co-operation of the Dexter workmen, as well as the machine builders.

(Extract from Paper Trade Journal)

Upon the completion of an "M & W" paper machine, it is assembled completely in our shop. This minimizes the work of installation at the mill, and assures the owners of efficient and immediate operation . . . without the necessity of extended running to straighten out the machine before going into production.

All "M & W" Machines can be fully expected to meet or exceed the specification requirements as to speed and quality of paper to be made.

We are well equipped with modern machinery to build Fourdrinier Paper Machines, Cylinder Paper Machines for Board and Specialties; and all apparatus pertaining to equipment of modern paper and pulp mills.

PAPER TRADE JOURNAL
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FEDERAL FORESTRY APPROPRIATIONS

The subjoined table, for which the PAPER TRADE JOURNAL is indebted to Mr. R. S. Kellogg, chairman of the National Forestry Program Committee, summarizes in an interesting manner by sections some of the outstanding facts regarding the Clarke-McNary, the McNary-Woodruff and the McSweeney-McNary laws. The tabulation shows:—

(1) The ultimate authorization for appropriations thereunder.

(2) Appropriations for the fiscal year ending June 30, 1929.

(3) The minimums asked by the National Forestry Program Committee at the Budget hearing, October 11, 1928, and subsequent Congressional hearings.

(4) The Budget recommendations thereon, reflecting the attitude of the Administration.

(5) The appropriations made by Congress for the fiscal year beginning July 1, 1929.

It will be noted that 1929-30 appropriations under the Clarke-McNary law are $213,000 more than for the present year and $100,480 more than the Budget recommendation. This, however, includes Welch bill salary adjustments, so that the net increase is $201,018, chiefly for cooperation in forest protection.

Congressional appropriation for land purchase under the McNary-Woodruff law is maintained at $2,000,000, an increase of $100,000 over the Budget, but subject to a Welch bill item of $7,960.

Under nine sections of the McSweeney-McNary forest research law, appropriations for the next year total $1,487,986, compared with Budget recommendations of $1,323,849, and current appropriations of $1,226,155. The appropriations for next year, however, include Welch bill adjustments to the amount of $83,188, so that the net gain in money available for forest research is $178,553. Among the several items, it will be noted that there is substantial gain in the appropriations for forest experiment stations, for combating forest insects, for forest range management and for research in forest products, the latter increase covering specifically studies in methods of preventing paper mill stream pollution, logging and milling, naval stores and experiments in the manufacture of pulp and paper from southern pines. Altogether, a fair start is now provided for work under every section of the long-time program of the McSweeney-McNary law.

New forestry appropriations by Congress in addition to the foregoing provide $10,000 under the Clarke-McNary law for starting a study of forest fire insurance and $30,000 for an investigation of the relationship between erosion and various types of ground cover.

Altogether, the action of Congress in making these appropriations under the existing circumstances may be looked upon as a growing recognition of a situation which those familiar with it have often presented.

NAVAL STORES ACT BENEFITS INDUSTRY

Turpentine and rosin producers have improved their products materially, by taking advantage of the service features of the Federal naval stores act and cooperating with the Government, according to Dr. F. P. Veitch of the Food, Drug, and Insecticide Administration, United States Department of Agriculture, who recently returned from a trip through the South.

Like the other acts enforced by the Food, Drug, and Insecticide Administration, the naval stores act, in effect, makes illegal the shipment in interstate commerce of adulterated products.

Steps to bring about increased cooperation and greater uniformity in the handling and grading of rosin were taken at the conferences which Doctor Veitch held with department rosin graders, the Florida Supervising Inspector of Naval Stores, and several of his assistants, and arrangements were made for Government grading of rosin for several producers in southern Georgia.

FEDERAL FORESTRY AUTHORIZATIONS AND APPROPRIATIONS

	(1) Authorization	(2) Appropriation 1929	(3) Minimum asked for by Nat. For. Prog. Com.	(4) Budget Recommendation	(5) Appropriation 1930
Clarke-McNary Law—1924					
Forest Protection Cooperation	$2,500,000	$1,200,000	$1,600,000	$1,300,000	$1,400,000
Distribution of Planting Stock	100,000	75,000	90,000	82,520	83,000
Farmers Extension Service	100,000	60,000	75,000	65,000	65,000
Total	2,700,000	1,335,000	1,765,000	1,447,520	1,548,000(a)
McNary-Woodruff Law—1928					
Forest Land Purchase	3,000,000	2,000,000	3,000,000	1,900,000	2,000,000(b)
McSweeney-McNary Law—1928					
Experiment Stations	1,000,000	354,300	420,600	384,300	413,000
Tree and Wood Diseases	250,000	98,500	113,650	98,500	106,560
Forest Insects	350,000	185,000	192,113	174,570	204,000
Forest Wild Life	150,000	10,000	24,000	25,000	17,596
Weather Conditions	50,000	23,600	26,240	.....	29,740
Range Management	275,000	49,755	72,775	64,075	67,000
Forest Products Research	1,000,000	505,000	555,000	537,404	585,000
Forest Survey	250,000	.....	75,000	25,000	40,000
Forest Economics	250,000	.....	25,000	15,000	25,000
Total	$3,575,000	$1,226,155	$1,504,378	$1,323,849	$1,487,896(c)

(a) Includes Welch Bill adjustment increase, $11,982; (b) Includes Welch Bill adjustment increase, $7,960; (c) Includes Welch Bill adjustment inc., $83,188.

Philippine Paper Market Competitive

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., March 27, 1929.—The Philippine market for printing and wrapping paper, which is chiefly supplied by the United States, is growing more keenly competitive in recent years, according to the Department of Commerce.

Fairly large imports of printing papers were brought into the Islands last year, the increase being 2,358,948 pounds over 1927 and 5,413,671 pounds over 1926, while the United States share in this trade declined approximately 15 per cent under 1927 and even slightly under that of 1926, reports the American trade commissioner at Manila.

During the same period, Germany's exports of these papers increased from 9 per cent of the total imports in 1926 to 10 per cent in 1927, and 20 per cent in 1928. The United States, which supplied 62 per cent of the total imports in 1926, furnished only 45 per cent in 1928.

Receipts from the Netherland and Finland also have experienced considerable decline during the past three years while those from Sweden, Belgium, and Norway as well as Germany increased. These trends seem to indicate that Europe is successfully entering the trade which was formerly supplied altogether by the United States.

Both glazed and unglazed news print is in demand, the cheaper qualities coming from the United States and the better grades from Sweden, Germany, and Czechoslovakia. Both kinds are used for printing newspapers, periodicals, programs, and for manufacture of school supplies. The cheaper grades are used also for wrapping purposes as well as the printing of newspapers. The latter range in price from 4¼ to 5½ cents per pound.

On the other hand, United States exports of wrapping papers during the past three years have increased steadily from 63 per cent of the total receipts in 1926 to 73 per cent in 1927 and 80 per cent in 1928.. Imports from Germany in the meantime have gradually declined from 6 per cent in 1926 to 4 per cent in 1927 and 3 per cent last year. Imports from Sweden and China, although exceeding 1926, were in both cases less than in 1927. The paper most in demand is manila wrapping, much more of this being used than kraft or sulphite. The best grade is imported from Belgium and is used principally in the manufacture of catalogs and envelopes. The price of Belgian manila is much more than that of the American paper ranging in price from 7 to 8 cents per pound as compared with 5 and 5 cents quoted on the latter. Next to manila paper, kraft is the most popular. This paper comes chiefly from Norway, Sweden and Germany, although the United States enjoys a fair share of this trade. It can be obtained in small rolls or in sheets and is most in demand by the retail hardware stores and cigar factories. In large rolls and of heavier weights it is used by the desicated coconut manufacturers for lining export cases. Prices range from 7½ to 8 cents per pound, depending upon quality and weight.

American Writing Makes Good Report

HOLYOKE, Mass., April 1, 1929.—An increase of eighty-six per cent in net profits, despite a reduction in sales of almost eight per cent, is shown in the second annual report of the board of directors of the American Writing Paper Company, Incorporated, Holyoke, made public today by S. L. Willson, president.

Far-reaching effects of strict economies employed under a budgetary control system established last year are reflected in the comparative results of 1927 and 1928 as set forth in a table of sales and net profits. This table, which is made part of the text accompanying the report, shows a decrease in sales during 1928 of $1,140,485.30 and an increase of net profits of $128,161.87. Net sales for 1928 totaled $12,199,044.74, with net profits for the year of $277,933.81.

Production in 1928 dropped to 61,930 tons, a decrease of 9.86 per cent. Carrying through of the company's policy, "Better Business" rather than "Bigger Business" resulted in a material increase in the tonnage of better quality papers.

Heavy rehabilitation expenses during the past year have in no wise affected the company's financial position, according to Mr. Willson. There was spent in 1928 for rehabilitation, plant additions and betterment, $768,556.86. There was also spent for maintenance and repairs $402,564.24, which amount was charged into cost of operations; the total sum for the two items being $1,171,121.10. There was no depletion in the cash working capital, a condition made possible by reduction of inventories of raw material and finished products, budgetary control and the addition of the profits of 1927 to the reserve as well as the sum of $233,-721.53 depreciation which became available as cash for necessary expenditures.

"In every branch of our business economies have been effected," Mr. Willson's statement reads in part. "We expect to effect many more during the current year which will enable the company to steadily improve its operations, and its net returns.

"The condition of the mills and of the inventories is better than ever during the history of the present company or its predecessor. The system of budgetary control established last year has been continued with splendid results.

"The present ratio of current assets to current liabilities is a little over seven and one half to one . No money has been borrowed—all bills have been discounted, and all interest obligations on bonds and serial notes have been paid when due. Our losses from bad accounts were one twelfth of one per cent."

St. Regis and Taggart Officials Inspect Mills

[FROM OUR REGULAR CORRESPONDENT]

OSWEGO, N. Y., April 1, 1929.—A tour of inspection of the plant property of the Taggart-Oswego Paper and Bag Company was completed last week by R. B. Maloy, of the St. Regis Paper Company, A. B. Meeker, president of the Bates Valve Company, and J. T. Teran, also an official of the latter firm. Following the inspection it was announced that J. T. Teran had been placed in charge of all the kraft paper mills in this country operated by the Taggart and Bates interests . The new supervisor has been located for some time in Chicago, Ill., but it is understood that he will now establish headquarters in the East in order to keep in close contact with affairs in the Oswego and other Northern New York subsidiaries.

During the visit at the Taggart plant the officials held a lengthy conference with Hayes Lafaivre, who is superintending production activities, and it is expected that an expansion program will soon be under way. It is understood that new machinery will also be installed which will greatly increase production. Reports of a new addition which will allow of the doubling of output could not be confirmed and it was announced that future expansion plans would be decided upon at a meeting to be held next week.

Henry W. Somers Passes On

THOMSON, N. Y., April 1, 1929.—Henry W. Somers, for years one of the most prominent paper mill men in Northern New York and president of the Iroquois Pulp and Paper Company, died during the past week on an ocean liner which is scheduled to dock at Genoa, Italy, within a few days. Mr. and Mrs. Somers sailed from New York on March 22 to spend some time touring Italy. He was born at Glens Falls and was 64 years old. Ship physicians pronounced his death due to an attack of acute Brights disease. For many years Mr. Somers had made his home at Fort Edward but because of his business interests he moved to Saratoga a short time ago. In addition to his paper mill interests he was also vice president of the Fort Edward National Bank, a director of the Albany Trust Company, a director of the Adirondack Trust Company of Saratoga, and president of the General Carbonic Company of New York. It was learned that the remains will leave Genoa on the Italian liner *Roma* for this country on April 3 and funeral services will be held in Fort Edward where the deceased had many friends.

CO-OPERATION

THE spirit of co-operation, as it exists throughout the Mathieson organization, arises out of a sincere desire always to give a little more than value received. Consumers know that Mathieson Chemicals are good products, that their containers are right, that they are delivered at the time specified. The important thing is the spirit of the organization that makes these things possible—that co-ordinates the thousand and one factors involved.

Co-operation of this sort is inspired by something deeper than mere good policy—but that it *is* good policy is shown conclusively by the regular renewal, year after year, of so many Mathieson contracts.

The MATHIESON ALKALI WORKS (*Inc.*)
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Modified Virginia Soda
Ammonia, Anhydrous & Aqua
H T H (Hypochlorite)
PURITE (Fused Soda Ash)
Sulphur Dichloride
Benzoyl Chloride
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Benzoate of Soda
Benzyl Alcohol
Benzaldehyde
Ethyl Vanillin
Benzoic Acid
Coumarin
Vanillin

MATHIESON CHEMICALS

MATHIESON CHEMICALS

Section of the
Technical Association of the Pulp and Paper Industry

AN ORGANIZATION FOR THE ENCOURAGEMENT OF ORIGINAL INVESTIGATION AND RESEARCH WORK IN MILL ENGINEERING AND THE CHEMISTRY OF PAPER, CELLULOSE AND PAPER-MAKING FIBERS GENERALLY; IT AIMS TO PROVIDE MEANS FOR THE INTERCHANGE OF IDEAS AMONG ITS MEMBERS IN ORDER THAT PROCESSES OF MANUFACTURE MAY BE MADE MORE EFFICIENT AND IMPROVED ALONG TECHNICAL LINES.

Edited by
RONALD G. MACDONALD, Secretary

Wood Consumption in News Print Mill*

By John S. Bates[1]

Weight of actual wood is the true measure of wood consumption in a mill. The difficulty of weighing wood and determining average moisture content unfortunately leaves us with very little exact information regarding the quantities of actual wood consumed in the different mills. The trend will undoubtedly be in the direction of more weighing of wood, and efforts along this line will be well repaid, just as boiler-plant operation has progressed so greatly with the help of coal weighing devices and other measuring instruments. The development of continuous automatic weightometers for pulpwood will be watched with real interest. In the meantime, mills should not fail to make periodic tests on the weight basis, partly for the benefit of establishing percentage yields of pulp from wood and partly for the purpose of relating volume of wood to weight of wood.

Volume of wood is a less accurate measure of consumption, but has the advantage of easier and wider application. Furthermore, volume provides a satisfactory basis of accounting from tree to process. Volume also has a definite bearing on wood value, and measurement by volume is likely to remain, even when weighing of wood into mill processes is practiced. True volume can be determined by immersion of the wood in water to measure displacement, but the method is not a check on log scaling and is practically limited to periodic tests of blocks. Scaling is the method of universal application, and it will therefore continue to be of widest usefulness. Solid volume in cubic feet is perhaps the most logical measure of wood for accounting purposes, because it is the nearest approach to actual wood quantities that can be traced from forest to mill. Scaling of all logs and blocks by total length and middle diameter gives a convenient basis for calculating solid volume in cubic feet, and reasonably accurate checking can be carried out at different stages of wood travel; special tests would readily relate this scale volume to true volume by immersion. Ordinary log scaling in feet, board measure, is still the official method, and it has its rightful place in the commercial handling of wood. The results based on standard length of log, diameter of small end, allowance for certain kinds of rot, and interpretation in terms of equivalent board feet of lumber, obviously cannot be a direct measure of effective wood for news print manufacture. The cord is another indirect volumetric measure of wood and daily varies 10 per cent with the whims of nature and man.

Proportions of species and rates of growth have a larger bearing than is usually realized on volume of wood required for a mill. Spruce averages about 25 per cent heavier than balsam fir in terms of bone-dry wood per cubic foot; jack pine approaches spruce in density; white spruce and black spruce are not equal in average density. The rate of growth of any particular species also varies in any one section and widely in different districts, producing decided variations in wood density. Furthermore, the weight of actual wood required in a mill depends to some extent on the volume factor. For instance, dense spruce permits longer cooks than light balsam fir, in the same sulphite digester capacity, resulting in higher percentage yield for a given tonnage and the better quality of pulp, may also permit the use of less sulphite in the news print; in the same way spruce tends to lower the percentage losses in the groundwood process; the combined result would be a considerably lower bone-dry weight of spruce, compared with balsam fir consumed per ton of finished news print paper.

Infected wood, weathering of wood, surface condition, moisture content, size and other quality variations have their effects on mill processes and wood consumption. Rot is all a question of degree, and a reasonable proportion of moderate decay can be handled by a new print mill with fairly good yields, particularly in the sulphite process; on the other hand, the overall cost figures from tree to paper and the quality of product tend to be much less favorable than the quantity factor. Weathering of wood in transport and storage lowers wood-room efficiency and process yields to some extent. Surface defects, such as pitch streaks, adhering bark, charred patches, and end brooming, result in extra losses, either in woodroom or processes. High moisture content of wood tends to reduce capacity and yields in a mill. Very small wood gives poorer results than medium-sized blocks, and extra large wood is also usually a disadvantage.

Mill equipment and manufacturing practice also affect wood consumption. One mill may have more and better equipment at probably a higher capital investment than another mill; the first mill will consume less wood per ton of news print, even though the over-all cost of manufacture may be the same. Fortunately, most companies are now alive to the fundamental value of apparatus to ensure low barking losses and uniform chips in the woodroom, less drastic cooking conditions in the sulphite plant, low tailings in the groundwood plant, and better conversion to finished product in the paper mill. Manufacturing practice has equal flexibility in relation to primary wood consumption. The fibrous fraction of chipper sawdust may be left in the chips or cooked in a separate digester. End blocks, and even such other material as groundwood bull screenings, may be recovered in the form of sulphite chips. Close screening and deckering of sulphite and groundwood prevent useful fiber being lost with tailings and white

* Paper presented at the joint meeting of the Technical and Woodlands Sections, Canadian Pulp and Paper Association, Montreal, January 24, 1929.

[1] Member TAPPI, Price Bros. Co., Kenogami, P. Q.

water. Groundwood tailings may be refined to supplement the tonnage of groundwood pulp, or may be cooked in the sulphite digesters to lower the requirement of wood chips. Metering of slush pulps to paper mill is proving its worth, and it helps in reducing the percentage of sulphite required; this in turn reduces wood consumption, because there is a great difference between converting wood to sulphite at a yield of 50 per cent and producing groundwood at a yield of 93 per cent. Reasonably high moisture content in the finished news print is not only a direct saving of money but also cuts down the wood consumption. Finally, one of the greatest advances has been in the recovery of white water fiber into its proper place in the finished paper. We must insist that in most news print mills there is still more leeway for economy of wood than of any other raw material.

There is perhaps a natural tendency in an outline of this kind to elaborate the many factors that govern manufacture without getting down to concrete figures in each case. In order to stimulate practical discussion, a summary of conditions more or less typical of certain news print mills is given below. The figures themselves and the method of tracing the effects of variations through the mill processes may be useful in guiding the study of wood consumption under local conditions at any particular plant.

The table is in the form of a set of calculations for two mills, starting with the finished news print paper and working back to the wood in blocks entering the mill processes. Detailed measurements through the mill are first necessary, to establish average conditions, but estimations of certain factors may be useful in drawing an approximate picture in advance of complete measurements. Certain figures may be determined indirectly, such as percentage groundwood yield by measuring total losses, including bull screenings, tailings, fiber lost in groundwood white-water discharge and water solubles (dissolved organic matter) in all water leaving groundwood mill. Current measurement of wood into the mill and special mill tests of wood consumption serve as checks in relation to calculations of this kind.

The calculations in the table have not been extended back through block pile and woodroom operations to show the equivalent wood consumption measured at jack ladder, but the figures would be of several per cent higher to cover wood preparation losses. Care must be taken at this point correctly to relate actual weights and volumes of wood to the nominal log measures as checked by ordinary scaling practice. Also, no figures have been included in the table to show quantities of tailings and other secondary fibers produced, and the direct or indirect utilization of such by-product materials has a definite bearing on the wood-consumption problem.

It will be noted in looking over the figures that various factors in one mill are in the direction of increasing wood consumption compared with the other mill, while other factors have the opposite effect. It is interesting to make a series of calculations for a particular mill by changing the factors one at a time within reasonable limits, in order to see the final effect that each change would have on total wood consumption.

Variations in quality of wood applied to different mills may easily account for a difference of 10 per cent or more in total wood consumption on the volume basis, largely due to density variations according to species. Variations in mill practice may cause an additional difference of 5 per cent or more. It is therefore not uncommon to find one mill using 15 or 20 per cent more wood by volume than another mill, even though the true comparison of wood consumption on the weight basis may be favorable.

CALCULATED WOOD CONSUMPTION PER TON FINISHED NEWS PRINT

	Mill A	Mill B
Paper Mill:		
Wrapper, based on finished paper	1.3%	1.4%
Unfinished paper	1974 lb.	1972 lb.
Average moisture in paper	8.0%	6.8%
Moisture shrinkage	2.2%	3.6%
Fiber loss in paper mill (air-dry)	2.8%	3.4%
Total shrinkage from air-dry pulps to unfinished paper	5.0%	7.0%
Air-dry sulphite in unfinished paper	24.0%	22.0%
Air-dry groundwood in unfinished paper	81.0%	85.0%
Total furnish	105.0%	107.0%
Density of sound spruce, pounds bone-dry per cubic foot	26.0 lb.	25.5 lb.
Density of sound balsam fir, pounds bone-dry per cubic foot	21.0 lb.	20.5 lb.
Sulphite Mill:		
Bone-dry sulphite required per ton finished newsprint	426 lb.	391 lb.
Less an allowance in one case for cooking groundwood tailings at an estimated yield of 45% and producing 10% of the total sulphite pulp	43 lb.	....
Net bone-dry sulphite from chips	383 lb.	391 lb.
Yield of bone-dry sulphite from bone-dry chips	50%	45%
Bone-dry chips required	766 lb.	869 lb.
Add loss of chipper sawdust	3%	1%
Bone-dry wood in blocks to chipper	790 lb.	878 lb.
Wood by volume, spruce	75%	50%
Wood by volume, balsam fir	25%	50%
Average bone-dry wood per cubic foot, allowing for lower density of certain infected wood	24.5 lb.	23.0 lb.
True volume of blocks per ton finished newsprint	32.2 cu. ft.	38.2 cu.ft
Add overestimation of volume by scaling method	3.0%	2.5%
Scaled volume of blocks per ton finished newsprint	33.2 cu. ft.	39.2 cu. ft
Groundwood Mill:		
Bone-dry groundwood required per ton finished newsprint	1440 lb.	1509 lb
Yield of bone-dry ground wood from bone-dry blocks	90%	93%
Bone-dry wood in blocks to grinders	1600 lb.	1623 lb
Wood by volume, spruce	75%	25%
Wood by volume, balsam fir	25%	75%
Average bone-dry wood per cubic foot, allowing for lower density of certain infected wood	24.7 lb.	22.1 lb.
True volume of blocks per ton finished newsprint	64.8 cu. ft.	73.4 cu. ft
Add overestimation of volume by scaling method	2.0%	3.0%
Scaled volume of blocks per ton finished newsprint	66.1 cu. ft.	75.6 cu. ft.
Summary: (totals per ton finished newsprint)		
Bone-dry wood in blocks required for sulphite	790 lb.	878 lb
Bone-dry wood in blocks required for groundwood	1600 lb.	1623 lb
Total bone-dry wood in blocks per ton finished newsprint	2390 lb.	2501 lb
Comparative wood consumption on bone-dry weight basis	100%	104.6%
Additional bone-dry wood required if groundwood tailings were not cooked in sulphite digesters (3.7%)	88 lb.	....
Scaled volume of blocks required for sulphite	33.2 cu. ft.	39.2 cu. ft.
Scaled volume of blocks required for groundwood	66.1 cu. ft.	75.6 cu. ft
Total scaled volume of blocks per ton finished newsprint	99.3 cu. ft.	114.8 cu. ft.
Comparative wood consumption on scaled volume basis	100%	115.6%
Additional volume of blocks required if groundwood tailings were not cooked in sulphite digesters (3.7%)	3.7 cu. ft.	....
Analyzing the actual mill figures above:		
Difference in wood consumption by weight due to mill practice only		4.6%
Difference in wood consumption by volume due to wood density only		11.0%
Total difference by volume due to mill practice and wood density		15.6%

Paper Machine Control Equipment

By F. M. Roberts[1]

The Kaydeross Paper Company operates two Harper paper machines at the Pioneer Mill situated about seven miles from Saratoga, N. Y. The machines were originally driven by steam engines which were later replaced by two alternating-current, adjustable-speed motors on each machine. One motor drives the wet end of the paper machine, which consists of a couch and press, and the other motor drives the dry end of the machine which comprises the drier section, a calender and reel.

It was originally intended that the paper machine should be used exclusively for the manufacture of crepe paper and for several years only this type of paper was made. Recently it was found advisable to change the product to flat tissue paper. As a result, the Kaydeross Company unsuccessfully attempted to make the latter type of paper with the arrangements which had been used while manufacturing crepe. The inherent regulation of the two motors on the machine was not good enough to enable flat paper to be made without some additional speed-regulating equipment to

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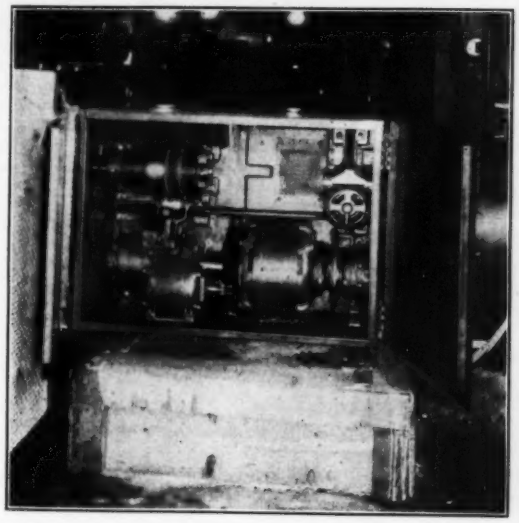
hold constant the relative speed between the two motors during the two sections of the machine.

The regulating equipment finally chosen for this service consists of a standard General Electric paper-machine type of speed regulator, arranged to work on the brushes of one of the motors.

There is a small alternating current pilot generator driven from the motors driving the wet end of the paper machine through a silent chain drive. This pilot machine has constant direct-current excitation and consequently the alternating-current voltage and frequency vary directly as the speed. The armature of the pilot generator is connected through a magnetic starting switch to the synchronous motor in the speed regulator.

The rotor and the stator of the synchronous motor in the speed regulator are both mounted on ball bearings and each is free to rotate. The rotor is driven through small cone pulleys by the motor which drives the dry end of the paper machine. The stator is phase wound and is supplied with 3-phase alternating current by the pilot generator.

As long as the speed of the paper machine remains as it should the speed of the rotating field in the stator of the synchronous motor is the same as the speed of the driven rotor, and the stator is stationary. If there tends to be a speed difference between the stator and rotor, the stator automatically moves in one direction or the other to maintain synchronism. The stator is connected through a chain drive to the brush mechanism on the motor driving the dry end of the paper machine, through a back-shaft mounted on the motor frame. In this way, any motion of the stator results in a movement of the brushes on the motor in such a direction as to correct the speed change which caused the motion of the brushes.



Motor to Hold Constant-Relative Speed Between Two Sections of Paper Machine. Cover Doors Open. Kaydeross Paper Co.

The small cone pulleys are introduced in the synchronous motor rotor drive to permit draw adjustment between the two sections of the paper machine. This draw adjustment is approximately 20 per cent, without making any change in the external drive for either the pilot generator or the speed regulator. The belt on the cone pulley is moved back and forth by a small motor which is operated by a push-button station on the front of the paper machine. The entire arrangement of the speed regulator is shown in the accompanying photographs. A speed range of 3 to 1 on the paper machines may be obtained with this equipment.

The control for the equipment is exceedingly simple. The paper machine motors are started by a push-button operated, full-voltage, magnetic starting switch. As previously stated, a magnetic starting switch is placed in the alternating current pilot generator armature circuit and is interlocked with the main motor line switches.

The magnetic starting switch in the pilot generator circuit not only provides the interlocking feature which prevents putting the regulator into service when only one motor is running (and so forcing the brush mechanism of the trailing motor to the limit of travel), but also furnishes overload protection for the speed regulator and for the pilot generator.

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Hot Acid Accumulator*

By A. D. Merrill[1]

Ever since Eugene Ritter and Carl Kellner, of Austria, brought out the present quick cook bi-sulphite process in about 1878, manufacturers of sulphite pulp have consistently endeavored to produce a pulp by that method which would equal in strength and other qualities the pulp produced by the indirect or Mitscherlich method. In general the pulp produced by the quick cook or Ritter-Kellner method is not as strong as that produced by the Mitscherlich method, but the cost has been considerably lower than pulp produced by the latter process.

In both of the above processes, it has been customary to recover the gases vented off during the cooking process by first cooling them, so that these gases would be more readily absorbed in the acid recovery tanks. For many years, operators of sulphite plants have sought a more economical process, so that it would not be necessary to cool these relief gases and then later on add a corresponding amount of steam to the digester during the cooking process to make up for the heat lost in cooling the relief gases.

The saving of this heat, as well as other material advantages that will be explained later, is now being accomplished in several of the pulp mills in the eastern part of the United States and Canada, and also in the middle west. The only fundamental difference is that this new process, known as the "chemipulp heat, gas, and liquor recovery and cooking process," makes use of a pressure vessel, known as an acid accumulator, this acid accumulator being interposed between the acid storage tanks and the digesters. By the use of this accumulator, the hot gases and liquor are recovered without cooling, and are stored up in the accumulator for use in the following cooks. The operation whereby this is accomplished is more clearly illustrated by the flow sheet, Fig. 1.

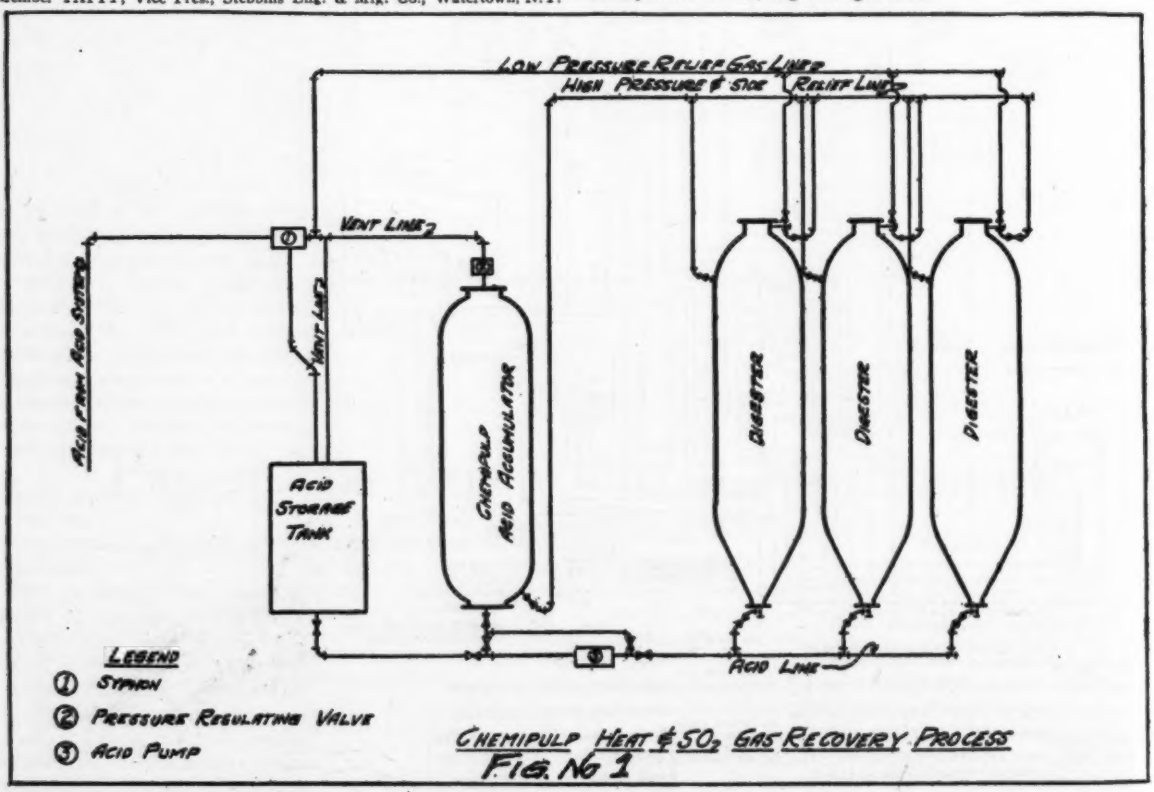
Referring to Fig. 1, it will be seen that two main relief lines are provided, one designated as low-pressure relief and the other as high-pressure relief, the side relief being brought into the high-pressure line, and the high-pressure line is connected into the bottom of the acid accumulator. The low-pressure line is used at the very last end of the cook, when it is desired to reduce the temperatures quickly or when it is necessary to bring the digesters down to very nearly zero pressure before blowing. The relief gases and liquor brought to the bottom of the acid accumulator are absorbed in same, due to the fact that the pressure in the accumulator is kept very closely at from 30 to 40 lb. by the pressure regulating valve, No. 2, shown on top of the acid accumulator. The vent from the pressure regulating valve is conducted to the line leading into the bottom of the acid storage tanks, so that any gases vented will not be lost.

All of the data accompanying this article are taken from the mill records of one plant, where this new recovery process has been in use for about five months. For purposes of comparison, Table 1 was prepared at that plant, showing the production data for the month of August, 1927, when they were cooking by the standard method, and the month of August, 1928, shortly after the chemipulp process was put into operation. For the month of August, 1927, we were not able to obtain daily steam consumption in the sulphite mill. However, we were able to obtain the daily pulp production figures and the total steam used during the month to produce this pulp.

There are three direct advantages in recovering by this method: (1) steam saving; (2) increased yield; (3) increased gas recovery with a resulting stronger acid.

* Paper presented at the annual meeting of the Technical Section of the Canadian Pulp & Paper Association. Montreal, January 22-25, 1929.

[1] Member TAPPI; Vice Pres., Stebbins Eng. & Mfg. Co., Watertown, N.Y.



CHEMIPULP HEAT & SO_2 GAS RECOVERY PROCESS
FIG. NO 1

Taking these up in order, referring to Table 1, at the bottom of the 7th, 8th, and 9th columns, it will be seen that during the month of August, 1927, cooking by the standard method, they averaged 5558 lb. of steam per ton of pulp produced, and that during the month of August, 1928, by the chemipulp method, they averaged 3772 lb. of steam per ton of pulp, or a direct saving, as shown by the comparison of two corresponding months, of 1786 lb. of steam per ton of pulp.

Referring to Fig. 2, where comparison for six months of the steam consumption by the standard and the chemipulp method is graphically shown, we note that the overall saving for these six months averaged approximately 1500 lb. of steam per ton of pulp produced.

The increased yield is not shown directly in Table 1, nor have we any exact data to give regarding this point. However, the mill records actually show that their average screenings have been reduced by one per cent. At the plant in question there is no opportunity of weighing in the charge of chips and getting the exact yield on a weight basis. However, from tests conducted at one of the other plants where the chemipulp process is in use, yields have been noted of 50 per cent on a weight basis, cooking a mixture of spruce and fir.

3.—Inceased Gas Recovery

Fig. 3 shows the increased gas recovery in terms of the sulphur consumption per ton of pulp produced, and from this we note that a comparison between the months of August, 1927 and 1928, show a saving of 68.8 lbs. of sulphur per ton of pulp produced; also we are giving below the average cooking liquor analysis for the same two months:

	Total	Free	Combined	Temperature
Chemipulp process	4.47	3.32	1.15	178° F.
Standard process	4.02	2.80	1.22	82° F.

From the above table we find that not only was approximately 69 lb. less of sulphur used per ton of pulp, but that the total SO_3 in the acid also tested 0.45 per cent higher when using the acid accumulator.

By using hot acid to fill the digesters, it is possible not only to save considerably on the cooking time, but also the maximum temperature reached is lower than by the old method; and, further, the penetration in one hour's time in using the hot acid is equivalent to that obtained after the digester has been under pressure for three and one-half hours by the old method of cooking.

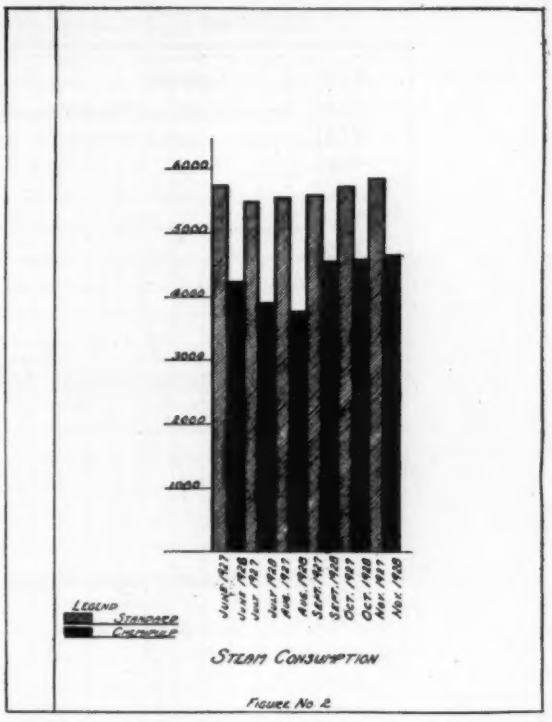


FIGURE NO. 2.

At the plant where the data given with this article was obtained, they have found since starting up the new hot acid recovery that they could increase the speed of their paper machines, and they also have practically eliminated breaks on the machine.

In addition to the direct savings given above, which are easily measured, there are four indirect savings from the use of hot acid:

1. Cooking can be controlled so that a soft easy-bleaching or a

TABLE NO. 1

COMPARISON BETWEEN STANDARD METHODS OF COOKING AND CHEMIPULP METHOD FOR THE MONTHS OF AUGUST, 1927, AND 1928. STEBBINS ENGINEERING & MFG. CO., WATERTOWN, N. Y.

Date	Tons Stock Produced		Steam Consumption			Lbs. Steam per Ton Stock			Sulphur Consumption			Lbs. Sulphur per Ton Stock		
Aug.	Standard	Chemipulp	Standard	Chemipulp	Saving	Standard	Chemipulp	Saving	Standard	Chemipulp	Saving	Standard	Chemipulp	Saving
1	43.798	54.72	.....	205,700	.....	.....	3760	.....	13,000	13,800	.....	297	252	.....
2	50.017	46.525	.....	198,100	.....	.....	4250	.....	14,800	13,800	.....	292	301	.....
3	46.118	61.142	.....	196,700	.....	.....	3200	.....	14,900	11,500	.....	321	226	.....
4	42.588	55.39	.....	209,800	.....	.....	3770	.....	12,500	5,200	.....	350	206	.....
5	48.530	.....	.....	85,300	.....	.....	....	.....	.....	11,900	.....	258	...	.....
6	.....	62.93	.....	214,600	.....	.....	3420	.....	5,400	14,700	.....	...	180	.....
7	.....	59.24	.....	196,100	.....	.....	3310	.....	14,000	14,500	.....	...	248	.....
8	48.533	57.21	.....	220,900	.....	.....	3860	.....	14,000	14,400	.....	400	255	.....
9	45.145	55.46	.....	230,800	.....	.....	4180	.....	14,000	13,900	.....	311	260	.....
10	41.048	53.24	.....	211,300	.....	.....	3960	.....	14,800	13,900	.....	341	261	.....
11	44.409	56.07	.....	194,100	.....	.....	3430	.....	14,800	10,00	.....	334	178	.....
12	45.031	.....	.....	.....	.....	.....	....	.....	14,900	6,500	.....	332	...	.....
13	42.436	52.73	.....	180,300	.....	.....	3420	.....	12,600	14,100	.....	298	268	.....
14	.....	57.41	.....	220,600	.....	.....	3960	.....	4,500	14,500	.....	...	253	.....
15	51.296	63.13	.....	215,100	.....	.....	3400	.....	15,200	14,800	.....	385	234	.....
16	50.122	56.22	.....	226,800	.....	.....	4040	.....	15,100	14,800	.....	304	263	.....
17	49.154	53.93	.....	212,100	.....	.....	3940	.....	15,100	14,600	.....	308	271	.....
18	42.120	59.28	.....	201,700	.....	.....	3400	.....	14,600	11,500	.....	347	194	.....
19	46.762	.....	.....	.....	.....	.....	....	.....	15,200	4,500	.....	326	...	.....
20	44.976	55.40	.....	227,200	.....	.....	4100	.....	10,800	14,900	.....	240	269	.....
21	.....	57.44	.....	234,100	.....	.....	4100	.....	5,400	14,600	.....	...	254	.....
22	48.100	61.66	.....	243,500	.....	.....	3940	.....	15,300	15,100	.....	430	245	.....
23	49.698	60.58	.....	223,900	.....	.....	3700	.....	15,100	14,900	.....	304	246	.....
24	44.734	58.09	.....	196,000	.....	.....	3370	.....	14,800	14,100	.....	331	242	.....
25	45.000	58.94	.....	205,800	.....	.....	3500	.....	14,500	13,200	.....	322	224	.....
26	46.502	.....	.....	.....	.....	.....	....	.....	15,100	.....	.....	324	...	.....
27	47.770	55.75	.....	197,500	.....	.....	3540	.....	10,600	15,200	.....	222	272	.....
28	.....	58.61	.....	238,600	.....	.....	4060	.....	4,500	14,600	.....	...	248	.....
29	49.092	56.14	.....	227,400	.....	.....	4050	.....	15,200	14,800	.....	402	264	.....
30	45.897	58.79	.....	231,100	.....	.....	3940	.....	14,900	14,900	.....	325	254	.....
31	42.818	53.87	.....	228,400	.....	.....	4250	.....	15,000	14,200	.....	351	264	.....
Total	1,201.69	1,540	6,680,100	5,879,500	800,600	.....	....	.....	390,400	393,500	.....	...	...	.....
Average	46.219	57.037	.....	.....	.....	5558	3772	1786	13,013	13,117	.....	324.8	256	68.8

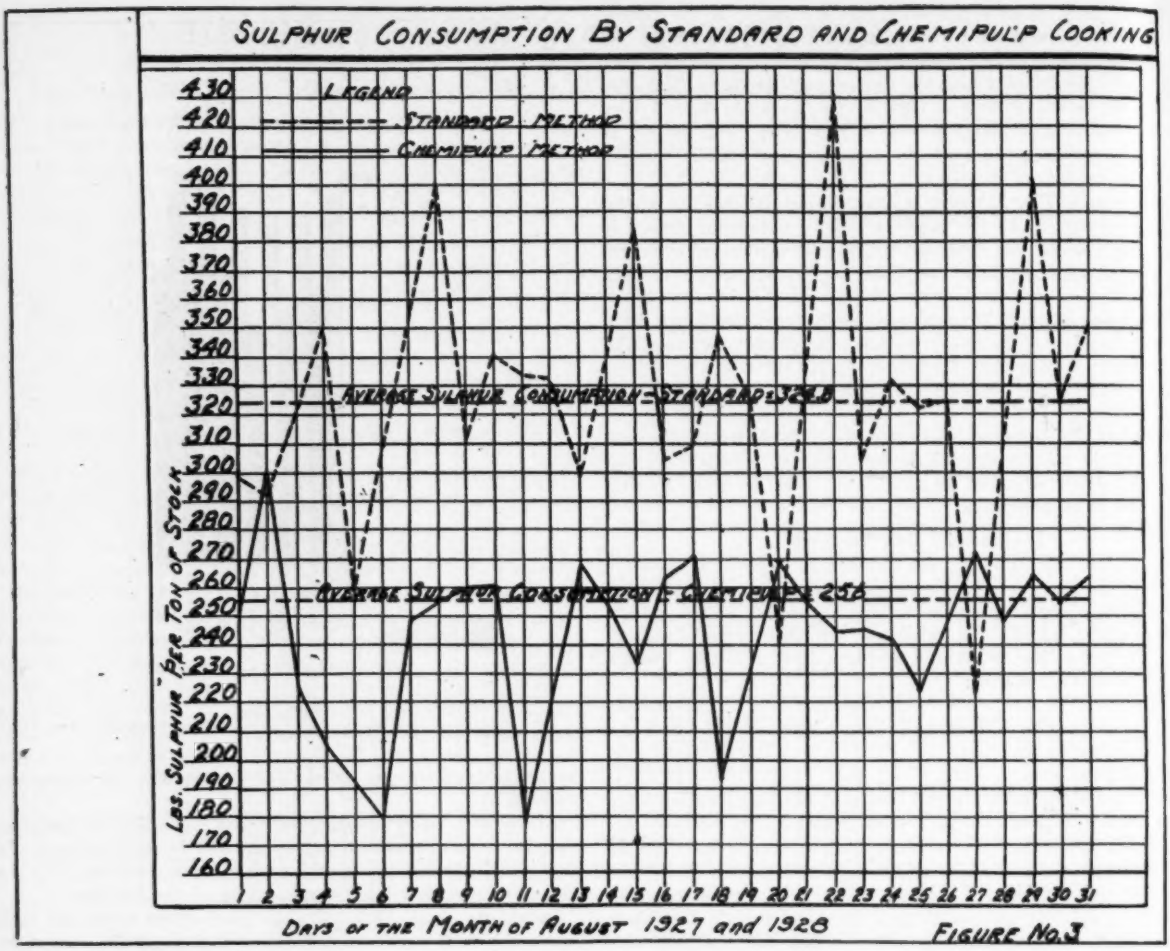

SULPHUR CONSUMPTION BY STANDARD AND CHEMIPULP COOKING
LEGEND
STANDARD METHOD
CHEMIPULP METHOD
AVERAGE SULPHUR CONSUMPTION - STANDARD = 328.8
AVERAGE SULPHUR CONSUMPTION - CHEMIPULP = 258
LBS. SULPHUR PER TON OF STOCK
430 420 410 400 390 380 370 360 350 340 330 320 310 300 290 280 270 260 250 240 230 220 210 200 190 180 170 160
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31
DAYS OF THE MONTH OF AUGUST 1927 and 1928

FIGURE No. 3

modified Mitscherlich pulp can be obtained, with a great reduction in screenings.

2. The hot gas recovery eliminates the troubles that most sulphite mills experience with the cold gas recovery during the summer months, and assures more uniform acid.
3. It is possible practically to eliminate, by recovery and saving, the blowing of obnoxious gases into the atmosphere.
4. The strength of the pulp is increased, so that less sulphite is required for furnishing such papers as news print or any other paper that requires a mixture, such as ground wood and sulphite.

In connection with the above it can be stated that on a cook of ten hours duration, we have obtained a pulp with an unbeaten strength of 105 per cent, and this pulp reached a maximum of 173 per cent during the beating. In all of the data given with this article, the other conditions in the mill were maintained practically the same as before the new cooking system was put into operation; that is, the cooking time was not changed, nor was the average wood used for cooking any different than they previously used. Further, the dryness of the steam, as near as could be determined, has been practically the same, as no changes of any kind were made in the boiler plant nor in the steam lines leading to the digesters.

Another point noted at this plant is that there are many instances of their easy-bleaching balsam pulp testing around 109 per cent before bleaching and 108.5 per cent after bleaching. Further, at this plant many different grades of pulp have to be produced to meet the requirements in the paper mill; that is, their hemlock is cooked for hard pulp, medium, and easy bleaching; the balsam is cooked for easy bleaching and hard; spruce is also cooked for both easy bleaching and hard; and the same also applies to tamarack and poplar.

Under conditions now obtaining, quality in the final product is more imperative than ever before, since the mills that produce the highest quality pulp are not only running more steadily but they also are receiving a higher price for their product.

American Scandinavian Fellow Feted

It is a pleasure to learn of the courtesies extended to John F Ohlsen who is one of the TAPPI Industrial Fellows of the American-Scandinavian Foundation.

For the past several months Mr. Ohlsen has been given an opportunity to learn Swedish pulp and paper making practice in the mills of Holmens Bruks at Halstavik, Sweden. Mr. Ohlsen was formerly employed by the Cornell Wood Products Company of Cornell, Wis.

Upon completing his stay at Halstavik the engineers of the Holmens Bruks Co. presented Mr. Ohlsen with a loving cup and throughout his entire sojourn at the mill these men were unusually helpful to Mr. Ohlsen. By special arrangements made by Frederik Grewin, Mr. Ohlsen was enabled to attend the winter meeting of the Swedish Pulp and Paper Association as a guest of honor.

Mr. Ohlsen is now in Finland and is receiving courteous and enthusiastic attention wherever he goes. It is to be hoped that the courtesies that are extended to visitors to this country from abroad and of Americans visiting European countries will continue along the same high plane that have been characterized by reports received during the past year.

Current Paper Trade Literature

Abstracts of Articles and Notes of Papermaking Inventions Compiled by the Committee on Abstracts of Literature of the Technical Association of the Pulp and Paper Industry

Clarence J. West, Chairman

Atmospheric Conditions in Paper Machine Rooms. F. M. R. Bulmer. Pulp Paper Mag. Can., International No., 117-120 (Feb. 1928); Paper Mill 51, No. 6, 16, 34, 38, 40 (Feb. 11, 1928). After explaining the modern conception of ventilation from the hygienic point of view the author gives the results of an investigation carried out on the atmospheric conditions prevailing in the machine rooms of two Ontario paper mills which showed quite clearly that conditions were far from what they should be for maximum comfort and efficiency of the machine crew.—A.P.-C.

Coloring of Container Board. Ivar Ekholm. Pulp Paper Mag. Can. 26, 476 (Apr. 12, 1928). Container board is generally colosed with cheap basic dyes lacking fastness. Owing to the fairly strong alkalinity of silicate of soda, when this is used as an adhesive, the liner should have sufficient water-resisting properties to prevent the silicate from penetrating and affecting the dye. A number of dyes made by the National Aniline & Chemical Company and possessing suitable fastness in such cases are discussed.—A.P.-C.

Improved Shaking Apparatus for Fourdrinier. C. E. Macklim. Paper Mill 51, No. 22,, 18-19, 70-71 (June 2, 1928); Paper Trade J. 86, No. 24, 57-60 (June 14, 1928). A discussion of the construction, operation and merits of the high speed Aldrich shake.—A.P.-C.

Doctor Operating Mechanism for Calendering Machines. J. A. Frossard and G. Lamoureaux. U. S. pat. 1,644,917, Oct. 11, 1927. Each of the rolls is provided with a doctor consisting of a thin, flexible plate mounted on an angle-iron bolted to a small cylinder parallel to the calender roll. All the doctors, except the one of the bottom roll, are mounted so that they normally fall out of contact with their respective rolls by the action of gravity, while the bottom roll doctor continually rests in contact with its roll. The doctor-supporting cylinders are each provided with an operating arm for bringing the doctors in operation, and these arms can be simultaneously operated by means of compressed air, but each of the arms can also be operated manually independently of the others, so that any doctor can engage its roll when the others are inoperative, or can be disengaged when the others are in operation. A ratchet wheel and cam are also provided for periodically bringing all the doctors into engagement with the rolls for a predetermined length of time.—A.P.-C.

Automatic Reel-Transferring Mechanism for Paper Winders. F. W. Vickery assignor to Pope Appliance Corp. U. S. pat 1,655-927, Jan 10, 1928. The patent covers improved means for bringing about the severance of the paper and the wrapping of it on an empty reel wholly automatically by means of a jet of water. A suitable nozzle is supported near the winding reel, and is directed towards the position the reel will occupy at the instant it is desired to transfer the web to it; and the movements of the winding machine mechanism preceding or accompanying the shifting of a new reel into winding position are utilized to open a valve to admit water in predetermined quantity to the nozzle. Provision is also made for adjusting the time at which water issues from the nozzle in relation to the instant at which the valve is operated, and also for rapidly closing the valve after the desired interval, in order that the water may not drop slowly or uselessly from the nozzle upon the web and cause breaks. —A.P.-C.

Paper Machine Drive. A. N. Russell. U. S. pat. 1,655,511, Jan 10, 1928. Secured to the ends of the drier roll spindles are gears, the pitch line teeth of which are preferably made smaller in diameter than the outside diameter of the rolls, and between the gears of adjacent rolls of the same row are idler gears having the same pitch diameter as the roll-driving gears, which transmit the motion from one roll to the next, so that they rotate in the same direction and at the same speed. The driving pinions secured to the motor shafts are so arranged that they drive one upper roll-driving gear and one lower idler gear, or vice versa. Balancing idler gears are provided at intervals between a gear in the upper row and one in the lower row, the balancing gears having teeth of the same pitch as the upper and lower gears. By means of this construction the upper and lower rows of rolls are driven in unison so that the paper travels at a constant speed throughout the drier section of the machine, the drive is well-balanced and affords easy access to the back of the machine for repairs, etc., and the machine may be driven at a high speed desired.—A.P.-C.

Sectional Electric Paper Machine Drive. Brown, Boveri & Co. Fr. pat. 624,908. In sectional electric paper machine drives it is customary to regulate one of the motors to a constant speed and to use this motor as a pilot or master motor to obtain the desired speeds in the other motors so as to have the required draw in the sheet of paper. According to the present invention, the couch roll motor is used as the master motor for the twofold reason that it drives the most delicate part of the paper machine and that it is the one subject to the greatest variations in load and would be more likely to affect the speed of the other motors if it were controlled through one of them. By connecting the couch roll drive to a tachometer dynamo which controls a quick-acting regulator, which in turn maintains the speed of the couch roll motor constant, the controlling shaft, and consequently the whole drive, is given a constant speed unaffected by variations in the load at the couch press or in the frequency of the electric current. When the speed regulating parts of the other motors are controlled from the couch roll motor by means of a shaft extending the full length of the machine, one or more auxiliary motors may be provided at other points to furnish part of the power required to drive this controlling shaft and ensure its transmitting the standard speed at all points of the machine. When the sectional motors are connected according to the Leonard system, the auxilliary motors are also connected to the Leonard dynamo. In order that their speed may synchronize with that of the master motor, the auxiliary motor should be series-wound; and the couple of the auxiliary motors can be regulated by means of an adjustable resistance connected in parallel across the field winding.—A.P.-C.

Process and Device for Starting Up Sectional Electric Drives. Siemens-Schuckert Werke. Fr. pat. 626,999. The relative speeds of the several motors are usually maintained constant by means of automatic regulators which are influenced, on the one hand by a factor depending on the speed which must be maintained, and on the other hand by a factor depending on the r.p.m. of the motors which in turn act on the field excitation of the various motors. In order to overcome the drawbacks inherent to the starting up of a drive regulated in this way, a hand-operated regulator is connected in parallel across the field regulator which automatically controls the speed of the motor. Before starting up the auxiliary regulator first suppresses, partly or wholly, the influence of the automatic regulator on the number of revolutions of the motor; and the motor is then started up, as by progressively short-circuiting the resistance in the induced circuit;

finally, the auxiliary regulator is progressively moved over to bring the motor back completely under the control of the automatic regulator.—A.P.-C.

Dampening and Calendering Paper. Papyro. Papeterie 50, 105-106 (Feb. 10, 1928). Brief discussion of the precautions required to obtain good results.—A.P.-C.

Two-Roll Calenders and Platers for Paper and Boards. A. Lambrette. Papeterie 48, 1146-1150, (Dec. 25, 1926); 49, 2-6, 102-109 (Jan. 10, 25, 1927). A discussion of their design and construction.—A.P.-C.

Process and Device for Determining the Moisture Content of Paper on the Paper Machine. Atlantic Precision Co. Fr. pat. 618,406, Paper Trade J. 86, No. 8, 136-137 (Feb. 23, 1928). An electric condenser consisting of two metal plates between which is a sheet or plate of a hygroscopic dielectric material (e.g., artificial silk impregnated with a hygroscopic salt) is placed immediately beneath the portion of the sheet of which the moisture content is required. Owing to the hygroscopicity of the dielectric element of the condenser, its moisture content will be in direct relationship to that of the paper. Other conditions being fixed, the capacity of the condenser will depend on the moisture content of the dielectric, so that the capacity of the condenser will give a moisture content of the paper. The condenser is connected in a radio receiving circuit which is tuned somewhat below resonance with an oscillator circuit. The amount of current picked up by the receiving circuit depends on the moisture content of the paper and is indicated by a galvanometer or milliammeter which can be graduated to read directly in variation of moisture content.—A.P.-C.

Permutit System in a Paper Mill. Anon. Paper Mill 50, No. 52, 10, 12 (Dec. 24, 1927). A report on the savings effected by the Hamersley Manufacturing Co. by installation of a Permutit water softening plant.—A.P.-C.

Wonders of Modern Paper Mills. Anon. Paper Ind. 9, 2119-2131 (March, 1928). A description of the mills of the Anglo-Canadian Pulp & Paper Mills at Quebec, and of the Ste. Anne Paper Co. at Beaupré, Quebec.—A.P.-C.

Piping Problems of Paper Mills. J. T. Farmer. Pulp Paper Mag. Can., International No. 257-268 (Feb. 1928). A general discussion of the problems which can arise in laying out a steam generating and utilizing plant.—A.P.-C.

Reinforced Earthenware Piping for Handling Bleach and Acids. Papeterie 49, 1018-1022 (Nov. 25, 1927). This consists of earthenware piping fitted inside a steel tube in which it is centered perfectly by means of a cement filling.—A.P.-C.

Permanence of Paper. T. C. Bentzen. Paper Trade J. 86, No. 8, 147, 149 (Feb. 23, 1928); Paper Mill 51, No. 8, 80, 82 (Feb. 25, 1920); Pulp Paper Mag. Can. 26, 309-210 (March 8, 1928). To account for the greater strength of linen and cotton papers, as compared with wood pulp papers, the author considers that the alpha-cellulose of the rag fibers is more capable of resistance to the folding and tearing tests than the alpha-cellulose of the wood pulp fibers. This was confirmed by experiments showing that on applying the mercerization test for alpha-cellulose practically none of rag cellulose is changed into colloidal cellulose, while wood cellulose is converted to an extent which is inversely as its strength. The greater permanence or durability of rag papers is attributed to this property. Experiments are described showing that the higher the percentage of high grade rags a paper contains, the greater its durability, and vice versa. A plea is made for the intensive study of the permanence of paper.—A.P.-C.

Effect of Residual Acid on the Rate of Deterioration of Paper. W. F. Hoffman. Paper Trade J. 86, No. 9, 58-60 (March 1, 1928). Determination of "internal" acidity and of copper number have been suggested for determining the probable resistance of paper to deterioration, both of which determinations must be carried out on the finished paper. The author has investigated the possibility of correlating the hydrogen ion concentration of the stock with the acid number of the finished paper. Determination of the deterioration or aging of a series of papers as measured by the bursting strength showed that the higher the acid number and the higher the hydrogen ion concentration, the greater, in general, is the decrease of the bursting strength of the paper. If the acid number is below about 25, as measured by the Swedish Government Testing Institute's method, the paper does not decrease appreciably in bursting strength when heated at 85 degrees C. for periods as long as 72 hours. If the hydrogen ion concentration of the paper is less than that represented by pH about 4.5 (determined by shredding 5 g. of paper into 250 cc. of water, boiling one hour, filtering, cooling and measuring electrometrically by means of a hydrogen electrode) there is no appreciable loss in bursting strength of the paper except when it is heated at 85 degrees C. for more than 24 hours. When heated for a longer period the hydrogen ion concentration should be less than that represented by about pH 4.7 to prevent deterioration due to acid. The effects of controlling the hydrogen ion concentration of paper stock during the manufacture of paper on the sizing and color of the finished paper are being studied.—A.P.-C.

Yellowing of Paper. M. Marini. Papier 30 1303-1308 (Dec. 1927). A brief discussion of the various possible causes of the yellowing of paper.—A.P.-C.

Study of the Thwing Impact Tester. H. C. Eckhardt and L. W. Snyder. Paper Trade J. 86, No. 15, 64-66 (Apr. 12, 1928); Tech. Assoc. Papers XI, 91-93 (June 1928). The construction and principles of operation of the instrument are presented, together with a method of calibrating it. A study of this heater showed that it is apparently well adapted for testing boxboards, a purpose for which it was primarily designed. It is unsuited, however, for testing single plies of light weight paper, because the resistance of such paper is insufficient to give an adequate scale reading. Consistent results were obtained with this instrument, which compared favorably with the results obtained by the hydraulic type of bursting strength tester. Just what the results mean, however, in terms of serviceability of the board, can be determined only through extensive experience.—A.P.-C.

McLaurin Gummed Tape Tester. Anon. Paper Trade J. 86, No. 14, 61 (Apr. 5, 1928). The test is carried out as follows: The tester is leveled and adjusted to zero setting. The pointer is moved to a position in contact with the carrier attached to the pendulum shaft. Two sheets of good grade kraft paper, cut to a standard length, are inserted and held fast by two clamps. A moistened strip of gummed tape is attached to the kraft paper. A short time is allowed for partial setting of the glue, and the pendulum release lever is then tripped. The pendulum exerts a constant pull on the test piece, and the resistance value of the moistened glue at the critical period is indicated on the scale. The actual time to make the test is only about 15 seconds. The merits of the instrument are briefly discussed.—A.P.-C.

Increasing the Capacity of the Elmendorf Tearing Tester. F. T. Carson and L. W. Snyder. Paper Trade J. 86, No. 13, 57-60 (March 29, 1928). In order to increase the capacity of the tester by merely increasing the weight of the pendulum in such a manner as to make the present scale graduations usable without complicated conversion formulas or tables, and so that the tester might be quickly convertible from the heavy duty to the present form, or vice versa, an adequate fundamental calibration formula was derived, the scale was calibrated according to this formula, and from the formula and the calibration data a weight was designed which could be inserted in the opening in the sector of the pendulum so as to double the capacity of the tester withtout necessitating any other modification in the original design. A number of modifications in the design of the instrument are suggested to improve its performance.—A.P.-C.

Results With Testers for Measuring Tensile Strength of Paper. R. E. Lofton and L. W. Snyder. Paper Trade J. 86, No. 24, 63-66 (June 14, 1928). Results are tabulated and plotted for tensile strength of seven different papers determined with six types of tensile strength testers at present on the market, one of which was found to be unsatisfactory for some cause which was

not ascertained. The reliability of the results obtained with the various instruments is discussed.—A.P.-C.

"Oil Penetration" Test for Roofing Felt. P. W. Codwise. Paper Mill 51, No. 8, 132, 134 (Feb. 25, 1928); Paper Trade J. 86, No. 9, 54-55 (March 1, 1928). The test consists in floating a small sample of dry felt upon an oil bath of definitely controlled viscosity (253 seconds on the Saybolt universal viscosimeter at the temperature at which the test is made) and noting the time in seconds required for the oil to strike through by capillary attraction and darken practically the entire uppermost surface. The test is carried out from both sides of the sheet and the results are recorded both from the felt and from the wire side. Taken in conjunction with the results of the kerosene test, the results of the oil penetration test give a picture of the saturating qualities of felt. The advantages of the test are discussed. Representative results obtained on a variety of felts are given, and the relation of these results to the saturating qualities of the sheet are indicated.—A.P-C.

Resistance of Printing Papers to the Penetration of Printing Inks. E. O. Reed. Paper Trade J. 86, No. 12, 54-55 (March 22, 1928). Use of printing ink itself for measuring the resistance of paper to printing inks was found unsatisfactory. Two methods have been developed and are offered for consideration. The "oil flotation method" consists essentially in dropping a 2-inch square of the paper on the surface of castor oil (United States Pharmacopœia quality) and noting the time required for complete saturation or absorption. The "oil drop method" consists essentially in allowing a drop of No. 0000 linseed oil varnish to drop on the paper and noting the time required for complete penetration, at which the oil spot assumes uniform translucency when observed against an illuminated ground glass. Both methods should be carried out under controlled temperature (preferably 70 to 75 degrees F.) and relative humidity (preferably 50 per cent) conditions, and the paper, chemicals and apparatus should be allowed to come to equilibrium with the standard conditions before making the tests. Results of tests so far made by both methods on the same paper give similar ratings as to oil resistance. The time of initial absorption of the oil does not check with practical tests with mimeograph or printing inks; but the time required for complete saturation of the paper by the oil furnishes reliable information which checks the results of practical tests. The thickness and weight of the paper affects the results, and their effects will be studied.—A.P.-C.

Determination of the Strength of Paper in All Directions Simultaneously. Papeterie 49, 978-982 (Nov. 10, 1927). Brief description of the Mullen tester and discussion of its merits.—A.P.-C.

Determination of Opacity and Gloss of Paper. Anon. Pulp Paper Mag. Can. 26, 425-426 (March 29, 1928). A detailed description of the proposed official methods of the Technical Association of the Pulp and Paper Industry.—A.P.-C.

Measurement of the Light Fastness of Colored Paper by Illumination with the Quart Mercury Lamp. G. Dalen and P. Wilke. Papierfabr. 26, 199-202 (1928); Wochbl. Papierfabr. 59, 345-349 (1928). From qualitative tests it is concluded that this lamp should furnish a satisfactory substitute for sunlight in making fading tests on papers. One hour of lamplight is equivalent to 3 hours of direct daylight or to 10 days north daylight, under the conditions used. Temperature and moisture content of the sample affected the results; activation of the air by the lamp apparently does not. Aging of the lamp is not a serious factor after it has been operated a few hours.—C.J.W.

Passage of Air Through Paper. Bruno Schulze. Papierfabr. 26, 198 (1928). The volume of air in liters per minute passing through 100 square centimeters of paper, under a pressure difference of 10 centimeters of water, are reported for 102 samples handled in routine testing. Tests were made at 65 per cent relative humidity. Values varied from 0.09 to 7.58 for bag paper, less widely for other materials. Since no other data on the papers were available, no conclusions can be drawn.—C.J.W.

Paper Qualities in the Government Service. W. Holwech. Tids. Kemi Bergvesen 7, 1-5 (1927); C. A. 22, 2662. A committee has studied the measurements which might be taken for securing uniform and appropriate qualities in paper purchased for use in the Norwegian government offices. The article contains an abstract of a report on the examinations carried out in order to establish efficient and reliable chemical and physical testing methods. No substantially new methods are suggested.—C.J.W.

Test for Distinguishing Bleached and Unbleached Groundwood. M. Marini. Papeterie 50, 65 (Jan. 25, 1928); Mon. Papeterie Belge, 8, 25-26 (Jan. 1928). As it is practically impossible to completely wash out the sulphurous acid or sulphite used for bleaching groundwood, the residual bleach is detected by boiling some of the pulp with stannous chloride and testing for evolved hydrogen sulphite. Bleached groundwood gives a positive test even after several months.—A.P.-C.

Evaluation of Wood Pulp. J. W. Berriman. Paper Maker and Brit. Paper Trade J. 75, 255, 257 (March 1, 1928); World's Paper Trade Rev. 89, 788, 790 (Mar. 9, 1928); Paper Making 47, 118-119 (April 1928). A plea for a standardized formula of the evaluation of wood pulp to be accepted by pulp makers and paper makers alike, discussing the various tests which should be applied in judging the value of groundwood, kraft, sulphite and soda pulp. —A.P.-C.

Standard Method of Preparing Tests Sheets to Determine the Initial Strength of Paper Pulp. Anon. Paper Trade J. 86, No. 8, 199-217 (Feb. 23, 1928). A detailed description of the method worked out jointly by the Committee on Physical Standards of the Canadian Technical Section and the Sulphite Committee of the Technical Association of the Pulp and Paper Industry, including sampling, apparatus and preparation of the test specimen. The official rules for sampling wood pulp adopted by the American Paper and Pulp Association, Association of American Wood Pulp Importers, and the Technical Association of the Pulp and Paper Industry are given in full, together with descriptions of suitable screening apparatus and of a laboratory hydraulic press (made by Watson-Stillman Co., New York), of the official TAPPI methods for determining bursting strength, tearing strength, folding endurance and tensile breaking strength, and of a constant humidity testing room as designed by the research department of the Mead Pulp & Paper Co., Chillicothe, Ohio.—A.P.-C.

Process for the Manufacture of Cardboard That is Waterproof, Greaseproof and Resistant to the Action of the Atmosphere. L. Rado and J. Modern. Fr. pat. 627,519 (Jan. 13, 1927). Aluminum foil, either as such or with a paper backing, is applied to one or both faces of the cardboard.—A. P-C.

Strawboard. M. E. Pennington and A. B. Davis. U. S. pat. 1,645,997 (Oct. 18, 1927). Strawboard is formed of disintegrated new straw, steam distilled and subsequently ozonized to render the product inodorous and sterile.—A. P.-C.

Paper or Pulp Board. J. H. Mitchell. U. S. pat. 1,648,237 (Nov. 8, 1927). Fibers obtained from the stems of sugar cane bagasse are bound together by fibers from the bagasse of sisal leaves.—A. P.-C.

Arsenic in Coated Papers and Boards. H. J. Sterns. Analyst 53, 83-86 (1928). A paper or board used for wrapping in its uncoated state is not likely to contain any dangerous amount of arsenic, nor are the adhesives used for coating sources of danger. Of the synthetic pigments used, antimony oxide may be used as part of the base for color lake, and the so-called arsenical greens may contain more than 30 per cent arsenious oxide. There appears to be no danger from the lakes of natural dyewoods, and, except for dyestuffs (such as Magenta and Methyl Violet) precipitated by arsenious oxide in alkaline solution, or those produced by means of tartar emetic, synthetic dyestuffs and pigments are generally free from arsenic although contamination during manufacture is possible. Pigment Scarlet 3B and Orange II quite commonly contain 50 to 100 parts of arsenic per million, and Pigment

Fast Red PRL, Fast Orange RL, and colors of the type of Patent Blue A (Disulphine Blue A) are also likely to contain arsenic. A limit for arsenic in coated boards and papers in force with certain users is 10 parts per million.—A. P.-C.

Converting of Light Weight Papers. L. E. Case. Paper Trade J. 86, No. 9, 64-66 (March 1, 1928). A brief discussion of the principles of coating, printing and embossing light weight decorative papers.—A. P.-C.

Report on Greaseproof Papers. H. A. Smith. Paper Trade J. 86, No. 12, 57 (March 22, 1928). For general routine testing the turpentine penetration test (Technical Association Papers VIII, page 23, June, 1924), either as such or modified by using black colored turpentine and ground glass for observing the end point instead of red colored turpentine and white paper, is very satisfactory on account of reproducibility of results, lack of troublesome cleaning up, etc. A slightly modified technic, suitable for an official method, is described in detail. Experience with the test for about 5 years is that it allows different operators to check one another reasonably well, and that the tests actually tally with the customers' findings as to the relative greaseproofness of papers in actual use.—A. P.-C.

Straw Insulating Board. S. D. Wells. Paper Mill 51, No. 6, 10, 35 (Feb. 11, 1928). A brief discussion of the properties and merits of *Inso Board* manufactured in a newly constructed mill at St. Joseph, Mo.—A. P.-C.

Paper and Paper Boards. G. F. Blomberry. Can. pat. 271,472 (June 14, 1927). A film of liquid dope constituted of rubber suspended in a slurry of colloidal clay is applied to paper or paper boards.—A. P.-C.

Stencil Sheets. S. Horii. Eng. pat. 259,808 (Jan. 23, 1926). Stencil sheets for use on duplicating machines comprise a base such as Yoshino paper treated with a composition formed from the Japanese seaweed known as *Fimori*, alkali soaps of solid fats, such as hardened oils, tallow or Japanese wax and glycerol, with or without agar-agar or gelatin. The composition may be added to the pulp during the formation of the paper base.—A. P.-C.

Stencil Sheets. S. Horii. Eng. pat. 261,203 (Dec. 10, 1925). A base such as Yoshino paper is coated or impregnated with a composition containing esters of polysaccharides such as starch acetate, cellulose acetate, cellulose nitrate or cellulose xanthate, in solvents, together with naphthenic acids, and with or without castor oil, Japan wax or ceresin or similar substances. The added substances may be mixed with the paper pulp during the manufacture of the paper.—A. P.-C.

Coated Paper. A. M. Collins Manufacturing Co. Eng. pat. 267,013 (Sept. 13, 1926). Paper suitable for printing halftones is prepared by coating both sides of the stock with a water soluble ground coat or enamel, such as casein or glue, containing satin white or clay with a usual pigment or coloring matter printed or otherwise applied lines to imitate laid paper, while the paper is still moist, and then calendering.—A. P.-C.

Stencil Sheet. A. B. Davis assignor to A. B. Dick Co. U. S. pat. 1,649,058 (Nov. 15, 1927). In forming a type impressible stencil sheet, a fibrous base such as Yoshino paper is coated with a composition including a fully stabilized synthetic resin such as may be formed from phthalic anhydride and glycerol.—A. P.-C.

Roofing Felt. A. W. Schorger assignor to C. F. Burgess Laboratories, Inc. U. S. pat. 1,649,984 (Nov. 22, 1927). Old tire casings are shredded and subjected to an air blast to separate the cotton from the rubber; the cotton is then used in making a roofing felt, which is then saturated with asphaltic material.—A. P.-C.

Fireproofing Paper. D. C. M. G. P. Papeterie 49, 970 (Nov. 10, 1927). A list is given of numerous fireproofing agents and of the concentrations at which they are used and the proportions required, on the weight of the stock.—A. P.-C.

Composition for Stiffening and Fireproofing Cellulosic Sheet Materials. C. R. Felix. U. S. pat. 1,643,116 (Sept. 20, 1927). A composition suitable for treating paper or cloth is formed of 1 quart of 40 degree Be. sodium silicate, 46 grams of sodium tungstate and a stabilizing substance such as boric acid together with about 2 gallons of water.—A. P.-C.

Treating Paper With Cellulose Acetate or Similar Substances. R. H. Chatham, assignor to Celanese Corp. of America. U. S. pat. 1,640,596 (Aug. 30, 1927). Paper, textile fabrics, or similar materials, are treated with a solution of cellulose acetate or other precipitatable cellulose derivative, and the latter is precipitated on the material by action of water.—A. P.-C.

Waterproofing Paper, Etc. H. Quittner. Eng. pat. 263,849 (Dec. 30, 1925). Rubber, balata or gutta-percha latex is caused to adhere strongly to paper or similar material by adding resin in colloidal state to the latex. A solution formed from shellac, alkali and water may, for instance, be added to rubber latex, with or without vulcanizing agents, accelerators, fillers, dyes, glue or other sizing material, etc.—A. P.-C.

Method of Making Transparent Paper with Opaque Markings. K. S. Maclachlan, assignor to Lincoln Pulp & Paper Co., Ltd. U. S. pat. 1,645,249 (Oct. 11, 1927). An opaque paper is made on a fourdrinier machine, with rubber or water marks as it passes through the machine; the paper is then subjected to a supercalendering operation at such a pressure as to render the paper transparent and the markings opaque.—A. P.-C.

Insulating Paper. H. Friedlaender. Eng. pat. 262,823 (Dec. 14, 1925). In making pliable, waterproof paper or millboard or the like, hard waxy substances are added to the pulp in the beater or kollergang. Montan wax, carnauba wax and coumarone resin may be used together. Rosin sizes, fillers and artificial phenol resins also may be used.—A. P.-C.

Cellulosic Wadding. Papeteries de la Robertsau. Eng. pat. 265,125 (Jan. 29, 1926). Cellulose wadding is rendered non-absorbent or repellent to moisture by impregnating it with substances such as paraffin solution, sodium resinate, dextrin, starch and gelatin and formaldehyde.—A. P.-C.

Wood Substitute. H. C. Harvey and H. L. Becher assignors to The Agasote Millboard Co. U. S. pat. 1,651,388 (Dec. 6, 1928). Compressed sheets are formed containing 100 parts of wood fiber or other suitable fiber and 43 to 100 parts of red acaroid gum.—A. P.-C.

Parchment Paper. Robert Fritsch. Wochbl. Papierfabr. 59, 63-67 (1928). Descriptive of the development and present status of the industry.—C. J. W.

Behavior of Cellulose With Acids. P. E. Altmann. Chem. Ztg. 52, 150-151 (1928). The effects of mineral and organic acids are briefly reviewed. A material resembling sulphuric acid parchment paper may be prepared as follows: 125 grams of sodium salicylate and 200 grams of glycerol are mixed with one liter of water; this paste, which may be further diluted with 250 cc. of water, is spread on unsized writing paper which is then dried.—C.J.W.

Metal Foil for Wall Paper Decoration. Aluminum-Walzwerke Singen Dr. Lauber, Neher Co., Ges. Eng. pat. 273,669, July 5, 1926. Wall paper such as described in Eng. pat. 247,234 is made with a soft annealed foil, the back of which is preferably roughened as by etching with water soluble agents such as waterglass or acid or alkaline solutions. The foil may be attached by an adhesive having an etching action such as a solution of shellac in ammonia water.—A. P.-C.

Stencil Sheet. A. B. Davis assignor to A. B. Dick Co. U. S. pat. 1,665,580, (Apr. 10, 1928.) Porous sheets such as Yoshino paper are coated with a homogeneous film including a fatty acid ester of a carbohydrate gum such as "tragacanth acetate." —A. P.-C.

Stencil Sheet. S. Horii. U. S. pat. 1,664,777. Apr. 3, 1928. Yoshino paper or similar fibrous material is impregnated with a mixture of esters of polysaccharides such as cellulose nitrate or acetate or mannan acetate in a suitable solvent such as amyl alcohol, acetone, methanol and amyl acetate and with alcohols obtained from oils and waxes of marine animals or fish, e.g., oleic alcohol or selachyl alcohol.—A. P.-C.

Section of the

COST ASSOCIATION OF THE PAPER INDUSTRY

Affiliated with

THE AMERICAN PAPER AND PULP ASSOCIATION

Edited by
THOS. J. BURKE, C. A., Sec.-Treas.

Association Statistics in the Paper Industry*

By J. A. C. Kavanagh[1]

There exists between your work and mine, a rather close relationship because without the data which you prepare there could hardly be any accurate or complete Association statistics. We look to you for the primary data from which to work up the general totals on the industries' operations.

Accuracy Depends on Accountants

In the Statistical Section of the American Paper and Pulp Association, we attempt to prepare data for the combined industry (of course without attempting to duplicate the work of the Group Associations). We are attempting to furnish the industry with a better picture of its general operations through the use of statistical data gathered from the units which make up the industry . . . and the success of our attempts depends very greatly on the information which the accounting divisions of these units are able to give us. As you improve your methods, so will we profit by being able to get more specific and accurate information and in addition you will be able to furnish it to us with less effort.

Mr. Burke was kind enough to ask me to speak on Association Statistics so that we might better understand each other, because we both know that there are many of the brethren in the accounting fraternity who upon seeing a Government or Association statistical report blank, will immediately break out into a rash of profanity . . . others tear their hair out while those of you with stronger will power merely file the blanks in some convenient waste basket where you are sure you won't find it when you look for it again. Well, I appreciate the feelings of those gentlemen.

Industry Needs Accurate Data

We try to gather data that has a definite bearing on the industry and we are not trying to waste your time. You all realize that the industry must have some knowledge of its general operations and it wouldn't make any difference who gathered the data, or what the department that gathered it was called . . . the individual companies have to furnish this data and your burden cannot be lightened. The steel industry gathers weekly statistics, the financial interests collect daily and hourly statistical data and the individual members of those groups have to furnish this data.

Statistical Activities of Association

The statistical activities, as they are being developed by the American Paper and Pulp Association, are concentrated about as follows.

1. The Monthly Statistical Summary which summarizes the operations of the main groups of the paper and pulp industry each month, both in tabular and graphic form.
2. The Weekly Business Review, covering the weekly conditions in the paper and pulp industries which do not appear in Trade Journals, and the weekly trend of general business conditions.
3. Furnishing weekly or monthly data on operations for specific groups in the industries such as the National Sulphite Paper Manufacturers Association and the Wall Paper Association.
4. Cooperation with the Department of Commerce in the improvement of their reports on the paper industry. This brings us into the work of the biennial census, the annual abbreviated census, and the new census of distribution. In addition, I am hoping that we can make a market survey in cooperation with the Department of Commerce in the near future, which I would like to have show the distribution of pulp wood into the various grades of pulp, the distribution of the pulp into the various grades of paper, and finally, the distribution of the various converted products. The industry needs such knowledge badly and it may tend to equalize the uneven distribution of productive capacity in the industry.

On those four points we concentrate our efforts, but there are additional details, odds and ends, that we must class as miscellaneous which include such things as specific requests for data from members and non-member mills, the trade press and educational institutions and various other details in gathering domestic data and indexing it for use when the occasion requires, etc. The miscellaneous work cuts heavily into our time and sometimes we feel as you feel, when you see an Association report form.

All of this work is done with the idea of helping the industry know what it is doing and furnishing the executives of the industry with data on conditions outside their own organizations so that their decisions and plans may have some relatively sound basis because you know that a decision not based on facts is just a guess.

Without the facts, you are just like a man in a dark room looking for a black hat which isn't there.

We are trying to lighten up the room a bit so you can see whether or not the "hat is there" and if we don't lighten it enough it's because we can't obtain enough information from the individuals. With the individual mill's cooperation, we can give the facts, but only too often those who want to know certain facts on their industry cannot themselves supply that same data from their own mill records because of their method of keeping accounts. That is one reason why I am an ardent supporter of better and standardized methods of keeping costs.

Statistics Help Budget-Making

Mr. Burke advocates the budget system for the paper industry. Starting with a sales budget you decide what you want to sell in a given period of say, six months, a year, or any subdivision of the year.

Knowing what your sales budget will be, you are able to budget

* Address delivered before the Cost Association of the Paper Industry, at the Waldorf-Astoria Hotel, New York, Feb. 19, 1929.
[1] Statistician, American Paper and Pulp Association.

your production. This will enable you to budget your raw material needs, labor costs, etc., thus allowing you to plan a financial budget covering the amount of money you will require in this period.

By being able to budget your operations ahead of time you are able to prepare an estimated balance sheet and profit and loss statement. You then, have prepared a logical plan of procedure and are in a position to make any changes in the mill's operations that changes in general conditions warrant as you go along.

This idea ties up with the general statistics of the industry as I will try to illustrate by the following idea.

Suppose you decide on a sales budget of a certain number of tons of paper . . . then, in planning to produce enough tonnage to take care of those orders, you find that you would have to operate your mill at about 90 per cent of capacity. By consulting the statistical reports of the American Paper and Pulp Association, you might discover that the mills, in your group, reporting to it, have only been averaging about 75 per cent of capacity (and these mills are competitors of yours). That is to say, that your group of the industry has been operating at approximately 15 per cent below the rate at which you plan to operate.

Such a situation should indicate that there is sufficient paper being produced with the industry running at approximately 75 per cent of capacity and it is reasonable to suppose that you can hardly expect to run 90 per cent on a standard grade when your competitors can't . . . indications are that the present supply is more than enough for the market.

You might also notice from the American Paper and Pulp Association reports, that inventories were a little higher than usual and the existing conditions would hardly be in favor of your original plan to run at 90 per cent of capacity, assuming that the mill in question is the average mill.

Going further into the data furnished by the American Paper and Pulp Association, you might notice that certain of your raw materials were showing a tendency to increase in price and unless you had contracted far enough in advance, you could reasonably assume that with your raw material costs increasing your income would be smaller.

I mention these few instances to illustrate the fact that general industrial data is of direct value to the individual company in preparing its operating schedules and of particular value to the men who prepare the budgets.

Statistics and Costs

We depend upon you for this general data on capacity, inventory, production, shipments, etc., and the value of these figures to you or to any other individual company, depends directly upon the accuracy of your reports to the American Paper and Pulp Association or other Associations, and you know that a chain is no stronger than its weakest link. By that, I don't mean that if one company makes an error in reporting, the totals will be misleading. This is not the case, because the number of companies reporting to the American Paper and Pulp Association is great enough to counterbalance the errors of a few, but if these forms are prepared carelessly by a great number of the mills, the resulting compilation will not allow us to infer any general truth . . . on the contrary, the inference is in error and of no particular value to the individual. No answer is better than the wrong one!

It is fair to ask, "Are trade association statistics as valuable to the individual as his own cost figures?" "Imagine such a blasphemous question!" say you, . . . obviously, your own cost figures are of paramount importance, they are absolutely essential to the company concerned but if you will consider the following hypothetical case, it will perhaps show that statistics are also an important cog in the organization wheel and cost data by itself is not all sufficient although it is the foundation of our reports.

Value of Association Statistics

Let's suppose you know all about your own firm's operations; your production, shipments, orders, day's business on hand, and all those little odds and ends. We will even suppose you know how much it costs you to make your paper and I am told that some companies actually do know what it costs them to make paper; we suppose you know all the facts, all the actualities. Suppose in addition, that there are no statistics available for the industry other than the rumors your salesmen can bring in; no industrial statistics on production in the various grades of paper, no data on capacity....just your own mill data to work with.

Suppose that time is the present. You know all about your own mill and for the sake of being different, we will assume that you are making money and everything is rosey.

Suppose that you decided to go into the sulphite wrapping paper business. You have heard of the enormous growth of the chain stores and you know that if chain stores' sales are increasing tremendously, then the number of commodities to be wrapped up are increasing, consequently, an enormous field for wrapping paper must exist. Well, that is all O.K. up to there. A fairly large demand does exist . . . you estimate about 1,500,000 tons.

Now we will suppose that you decide to make a grade of manila paper to sell at about 7 cents a pound. Don't fall out of your seats when I say 7 cents a pound, and I mean to sell in today's market. You know your costs we have assumed, and you know that you can't sell it at much less and make a profit.

Well, since you didn't know the industrial conditions that existed, you wouldn't know that the kraft paper industry had assumed threatening proportions and was a competitor to your nice manila sheet, and you didn't know that the industry already had a capacity of 2 million tons a year and of that productive capacity more than one-quarter was idle because the demand wasn't big enough.

You didn't know either, that news print production was on the decline in the United States and that this capacity which was going off news was transferring its activities from that scarred battlefield to the slightly less chaotic markets in the wrapping paper field.

Thus you would have been foolish to go into that field since you didn't know the facts. It is just as important to know the facts about the entire industry as it is for each company to know the facts about its own individual operation.

Over-Production or Under-Production

You hear every day the phrases, *OVERPRODUCTION* and *OVERCAPACITY* . . . it is ruining the industry! But it is quite probable that neither one of the two alone is hurting the industry. That has been the battle cry quite a while . . . long enough for us to believe that such is the case but perhaps *underconsumption* explains it better.

The days when the manufacturer made an article, figured how much it cost him to produce it, then added his profit to find his selling price, are gone . . . probably never to return. The consumer's pocketbook now determines the selling price . . . if he can get a price low enough . . . you will probably get the volume . . . but you must be able to supply the consumer and make a profit yourself.

It is a well known fact that *OVERCAPACITY* is a normal condition in almost any industry. . . and especially in the seasonal industries which have to handle the greater proportion of their orders in a short period . . . and *OVERPRODUCTION* may mean that your goods don't fit the market . . . too many varieties perhaps and too wide distribution with only a few of the varieties selling at a profit while the rest put you in the red.

Census of Distribution

I mentioned that a new census would be taken in 1930—the Census of Distribution. This of course means additional work and if you have additional outside work thrown at you naturally you want to know what the value of it will be.

I have suggested that underconsumption was one of the main causes of the poor condition of the paper industry and here are some facts about wholesale and retail business, brought out by the preliminary experiments with the Census of Distribution in 11 cities in the United States which show that underconsumption must result from uneconomical distribution.

About 29 per cent of the retail volume of business was done by chain store units which numbered about 15 per cent of all the retail stores in the 11 cities covered by the census. Seventy-one per cent of the retail volume was done by independently conducted stores which numbered about 85 per cent of all the retail stores in these cities. Of these individually operated stores, 28 per cent did an average volume of about $44.00 a week.

How much of the handling costs and expense of salesmen's calls can be paid out of an order from a retail store doing $44.00 total sales a week? The wholesaler or the manufacturer must be supporting these stores out of their own capital! (Is volume production helped maintaining these outlets which serve no useful purpose?)

The manufacturer is dependent on the merchant for his distribution and the merchant cannot survive by extending credit and carrying heavy stocks to parcel out in minute quantities to stores which do a $44.00 sales total per week.

This Distribution Census also shows that about 19 per cent of the individually operated stores did a weekly volume of $140.00. This class did only 4 per cent of the retail volume done by the individually operated stores. Thus, we have 47 per cent of individually operated stores doing only 6 of the 71 per cent of the total retail volume done by this type of store. Combining the group which did $44.00 per week volume with the group doing $140.00 weekly volume, we find that 47 per cent of the individually operated stores averaged about $82.00 a week.

When the costs of distribution, such as storage, credit, collection expense, handling charges, etc., are charged against an order to this type of store, it must be evident that their business can hardly represent a profit.

Although this preliminary Census of Distribution was an experiment, it emphasizes, among other things, the need for a national Census of Distribution. With such a large portion of the distributing channels representing unprofitable business, there can be little doubt as to the necessity for a compilation of distribution facts which will help the manufacturer, merchant and jobber find more efficient and economical channels of distribution. Today is the day of mass production and the problem has shifted, I believe, from lower production costs to lower distribution costs. This illustrates briefly the value in the census and I hope you will consider it as a valuable study and not just as an added piece of work.

Mr. Burke has been doing all in his power to further statistical activity in the paper industry and I appreciate his further efforts along those lines in allowing me the privilege of telling you about our activities.

The Statistical Department of the American Paper and Pulp Association is endeavoring to build up a statistical service which will furnish the industry with current statistical data . . . and the main value of statistics lies in the promptness with which they are published. Statistics which are too old are merely historical landmarks whereas the up-to-date statistics are indexes of present trends and are considerably more valuable.

Cost Facts and Tariff Making *

By Warren B. Bullock [1]

This is neither a paper nor an oration. The books on oratory say that no speaker should come before a group of listeners and apologize. I am not going to make any apologies whatever for my lack of knowledge about cost work; merely to say, that I am going to discuss with you one subject, from the standpoint of a layman who has had no contact with or knowledge of accounting. Figures are not my long-suit. Gentlemen, we have just gone through, down at Washington, an interesting session with the Ways and Means Committee of Congress, which is writing a Tariff Act or considering a revision of the present tariff. The experience our organization had in assisting the American Paper and Pulp Association to present its showing to Congress was very illuminating to me, from the standpoint of cost accounting. As I say, I am not going to talk your language; I cannot. I am going to give you the layman's reaction to that experience and its relationship to your work.

In days gone by, I have been through one or two tariff fights. Directly or indirectly, it has been understood that protective tariffs or Democratic tariffs, which ever they are, are written on a basis of politics and log-rolling, by which the New England states or the Middle West, which might happen to have a very strong representation in Congress, would secure very handsome rates of protection on the commodities produced in those localities. Other sections, the Democratic South, for instance, might not fare so well. There was a great deal of politics played. Today the situation has materially changed. I am not talking politics, but it is well known to all of us that in the last campaign the protection idea was discussed favorably by both the major parties, or at least by their spokesmen.

Tariff Making on More Scientific Basis

The situation, therefore, in Washington today is very much different from what it has been at other times of tariff making. I feel, myself, that we are coming to a time when tariffs will be written, not on the scientific basis that some of our speakers have urged. I don't think we have yet come to the millenium. But there is no question in my mind that tariff making today is on a much more scientific basis than it has ever been before, and a decided advance even over the situation in 1922, when the Fordney-McCumber Bill was passed. At that time we secured very fair rates of protection on paper. Today we have found a very radical change in some branches of the paper industry.

I am not going to talk tariff to you, but simply to point out that the requests of the paper industry as made to Washington last week for increases in duty, included only twenty-one items out of a total of seventy-four major groups in the paper industry. The only items on which tariff changes were asked were on grades which have experienced an industrial development since 1922 when the last Act was passed.

I might say, for instance, that today there is being manufactured in this country, a tissue paper weighing 3.1 pounds per ream, when I doubt if the paper was generally known under 5 pounds in 1922. That involves labor elements, productive conditions entirely different than those in 1922. The tariff situation may need rectification to take care of such new items in the paper field.

You have the fancy papers, these highly decorated papers. There has been almost a revolution in the industry in the last three or four years in that particular grade.

In trying to work out the relationship of a new tariff to industry, we have found that the sentiment in Washington is very strongly turning toward the necessity for statistics on which the tariff makers can fix a tariff rate that will not be excessive, and still sufficient to give the American manufacturer an even break with the foreigner in his own market.

The paper industry, I think you will be glad to hear, was highly complimented at Washington for taking the sane and correct position that the paper industry only asks a sufficient duty to compensate the difference between production costs in Europe and in the United States. In the preparation of all our data, as far as figures are available (and I am sorry that the data was not available in larger measure) we endeavored to secure the laid down price in New York without the duty, of a foreign grade of

* Address delivered before the Cost Association of the Paper Industry, at the Waldorf-Astoria Hotel, Feb. 19, 1929.

[1] Manager, Import Committee of the American Paper Industry.

paper. That would be the foreigner's sales price in the United States, which would include the manufacturing profit abroad.

In asking the duty rate, we endeavored to secure the figures as to cost of production—not sale price—of a comparable paper in the United States. If a paper were laid down in New York from abroad at five dollars per hundred, we would endeavor to secure the cost of production of one hundred pounds of that grade of paper in the American mills. We would then ask for a tariff rate on the foreign paper on a percentage basis that would make the laid down European price, duty paid, reasonably close to the American cost of production. You will notice that I have said cost of production and not sale price. The people down at Washington are not anxious to get the prices of American paper, but the cost of production.

We are quite willing to accept that principle in the belief that while the foreign laid down price, plus duty, includes manufacturer's profit, and the American comparable figure does not include the manufacturing profit, that we are able to compensate that difference by the better ability of the American mills to give service to their customers, and that that service compensates for this difference in a straight price comparison.

I believe, personally, that if a foreign paper is laid down with a duty which is equalized with the American cost of production, that American ingenuity and sales ability will take care of the American market satisfactorily to the American mills.

Shortage of Cost Data

It was something of a revelation to me when I endeavored to secure figures to justify the rates of duty which we asked, to find that in many groups, and especially the groups where the revolution has been most pronounced in the development of these new papers, that we had a woeful shortage of cost data. We could go to one mill and get figures which might be, from your standpoint, correctly computed.

We had few items where we were able to get from a group of the industry an average cost figure for any particular grade of paper. If we were able to produce from some one line, say grade X of paper B, the average cost of production of that grade from a large number of mills producing that grade, we would have our case practically won in Congress. We would say that the average cost of production in America is six dollars, that the European price laid down without duty is five dollars. Therefore, if you add on twenty per cent duty to your foreign commodity, you will get a six dollar laid down figure for the foreign article against six dollars for the domestic.

If we could get those lump figures from a group, our case would be won in Congress, and there would be no difficulty of getting the rate we ask. Unfortunately we have been unable in most cases to get any such data. We have had to take an individual concern and ask them to compute cost on a particular type of foreign importation, and go to the mat with the Congressmen on the basis of one mill's estimate of the cost of an article comparable to a foreign commodity. That is not very conclusive evidence to a Congressman. You would think, yourself, "Well, that is not the experience of Mr. Jones' mill."

Value of Adequate Cost Accounting

I am just mentioning that in a broad, non-technical way, but to show you how a layman has come to appreciate the necessity of adequate cost accounting in the paper industry, and the value which such cost accounting might be to the industry, even if it only happens in the period of tariff-making, once in six or seven years. In six or seven years we may need it only once, but that once when we need it may be the determining factor in making profits for the next tariff period, until the new tariff law is passed. It may mean the difference between profit and loss to an entire group of the industry.

That is the situation as I have seen it in just a broad, casual, prospective sort of way. I thought you might like to have that impression of your work from a man who knows nothing about the details of it. I am frank to say that, like many laymen, and perhaps many times some of your executives, I have felt that men like yourselves were to a certain extent a painful necessity to the organization.

It may be that I have thought that Brother Burke is talking cost figures to provide himself with something of a job as secretary of your organization. But I want to say seriously, gentlemen, in conclusion, that my experience in this tariff situation on this one item of cost, has convinced me that the cost man in a paper mill is a very important asset to the organization, and that the cost men in a group, in an industry, are an invaluable asset to the entire group.

As a layman, gentlemen, I am convinced of this, and I thank you.

Canada Power & Paper Report

The Canada Power and Paper Company has issued its first annual report to shareholders, the period covered being for the year ending December 31 last. In the face of the unsettled conditions in the news print industry, the balance sheet shows a remarkably strong working capital position, with earnings that allowed payment on all bonds and debentures and preferred shares of the company and its subsidiaries without departing from the policy of providing liberal depreciation.

The net working capital shown at $22,676,178, as against $13,365,657 as at December 31, 1927, as shown in the balance sheet set-up at the time of the formation of the company.

Gross earnings from operations, including income from investments and general interest, totalled $5,376,585, which, after deducting interest on bonds and debentures, showed $2,563,490 available for depreciation, depletion and dividends. Provision for depreciation and depletion totalled $1,332,404, and preferred dividends amounting to $1,050,000. After deducting these amounts and an item of $444 to provide for dividend on common share minority of Belgo Canadian Paper Company, there remained a surplus of $180,648, subject only to federal income tax.

After deducting all bonds, debentures, and preferred shares of the corporation and its subsidiaries, as well as all current liabilities, reserves, etc., the equity behind the corporation's common shares stands at $27,616,000, equal to about $40 per share.

George Chahoon, Jr., the president, in his report states that arrangements have been made for the sale of the corporation's holding of the entire outstanding common stock of Canada Paper Company, in return for which the corporation will receive 20,000 common shares of Howard Smith Paper Mills, Limited. This transaction was deemed advisable, inasmuch as products of Canada Paper Company are closely allied to those of Howard Smith Paper Mills, Limited. During the year, the corporation purchased an additional amount of standing timber, estimated at approximately 1,000,000 cords. As this timber is adjacent to the mills and adjoins some of the corporation's other holdings, President Chahoon states that it is a valuable addition to the corporation's wood reserves.

The Canada Power and Paper Company owns practically all of the common shares of the St. Maurice Valley Corporation and the Laurentide Company, St. Maurice Valley Corporation, in turn, owning practically all of the Belgo-Canadian Paper Company common shares. When acquired by Canada Power and Paper Corporation, the Laurentide Company owned most of the common shares of Laurentide Power Company, but these have subsequently been sold to Shawinigan Water and Power Company.

Cost and Technical Men Meet at Kalamazoo

KALAMAZOO, Mich., April 2, 1929.—"The Thirteenth Month calendar" was the subject treated by Norman Cowie, of the Hawthorne Paper Company, at the Wednesday evening dinner session of the Cost and Technical Association of the Paper Industry, Kalamazoo Valley division, which was held at the Park-American hotel. Another talk was made by V. G. Hinemuller of the Kalbfleisch Corporation on the technical working basis for radio.

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Depreciation in the Lumber Industry*

By A. L. Andrus

In considering depreciation one usually has in mind a single unit, such as a building, a machine, an automobile or some object that can easily be conceived by the mind, to which may be allocated a rather definite period of usefulness based upon experience with other similar units. It is a simple matter to provide for the depreciation of one unit by dividing into the cost the number of years of useful life and by charging the operations with the amount so obtained as representing the annual depreciation of the item. The matter becomes a little more complex when a number of different machines, installation costs and possibly a power plant are charged into one account for which it is necessary to determine the annual depreciation. Still, by analyzing the account and applying the same principle to each separate unit we can determine the total annual charge.

This general plan is followed by accountants and we are all familiar with it. It is true that obsolescence must be taken into consideration, as well as the salvage value at the end of the economic life, but these factors merely modify the basic plan to which I have referred. It is not intended, however, to discuss here all the aspects of depreciation, but to confine the remarks to a few features which have arisen in the lumber industry.

Lumbering in the Pacific Northwest

In the Pacific northwest lumbering is the chief industry and will no doubt continue to be so for a number of years to come. Owing to the large size of the trees and the mountainous character of the timber areas, lumbering operations are conducted in a manner totally different from that followed in the east and the south, as well as on a much larger scale in many cases. For these reasons, the experience of the eastern and southern mills can not well be applied in this district. The machinery and equipment in a modern plant cost relatively large sums and the annual charge for depreciation is a matter to be seriously considered, especially in an industry where the supply of available raw material is limited. Whether the enterprise be a logging operation consisting only of cutting the trees into logs and transporting them for sale to the sawmill; a log-buying mill which confines its operation to sawing into lumber logs which it has purchased from loggers, or a complete operation including both logging and lumber manufacturing, the depreciation charge must be considered.

The depreciation of the sawmill alone should not be very difficult to determine. It is well to consider, however, that a large portion of the cost is in the buildings, platforms and yards, and that the company's own product and employees' labor go into these costs. It is also true that buildings and platforms require frequent and extensive repairs and replacements because of hard usage. The management is prone to omit these necessary expenditures during bad years and to catch up during good years, and also is often careless in distinguishing between ordinary repairs and actual replacements. It is hardly necessary to say that the amount of repairing that has been done to structures of this character has a definite relation to the amount of depreciation that has been sustained.

Economic Life of Log-Buying Mill

The depreciation, or rather the economic life, of a log-buying mill is often dependent upon the amount of timber in its proximity. Many of you are probably aware of the fact that the timber section of the treasury department estimated that log-buying tidewater mills on Puget Sound and on the Columbia River had an economic life of but sixteen years from March 1, 1913, solely because of the probable exhaustion of timber available to them. Many income-tax cases were settled by providing for depreciation on that basis. While we do not expect to see all such mills go out of business in 1929, it is a fact that some of them have already closed and the others do not have a very definite future. Failure to provide for a situation such as this may mean that a company which has invested a considerable sum in a mill may operate and show profits for a number of years, as long as it is possible to get logs from the vicinity. As soon, however, as the accessible timber has been cut and the only supply is more difficult of access, the cost of the logs will become so high that the company may have to cease operations although it has a relatively large balance in its plant account representing a plant that has no value in its present location. This factor must be taken into consideration in determining the rate of depreciation of the log-buying mill.

An Unusual Situation

When we consider depreciation of the logging railroad and equipment of the logger, or of the complete lumber company which owns its own timber and logging equipment and operates its own sawmill, we are faced with an unusual situation. It was a simple matter in the earlier days of lumber in the northwest to build a sawmill almost anywhere with timber all around it and to take off the adjacent timber, get it to the mill and cut it into lumber. This has been done to such an extent that all the timber fringing Puget Sound, the Columbia River and most of the railroads has been put into the logging railroad and equipment. Some mills have purchased large areas of more remote timberland and have constructed at some point at which the timber will be accessible, as well as providing rail or water shipping facilities. Logging railroads have been built into the tract and will eventually be extended to take off all the timber on the tract. It is easy to see that the first timber which is cut will be that most easily reached with the least expenditure for logging railroad and equipment, and that the last timber to be removed from the tract will be that which is reached only after the maximum amount has been put into the logging railroad and equipment. It is evident that the cost of transporting workmen and supplies will increase as the sphere of operation becomes more remote and that there will be a tendency toward increasing costs of all kinds. Thus, the modern lumber operation faces a constantly increasing cost of its raw material.

Should Receive Careful Consideration

This condition, which is quite different from that of any other manufacturing enterprise, should receive careful consideration. Would it be proper to commence paying out in dividends all the profits realized in the first five years' operations when the company has a tract of timber which is sufficient for a twenty years' supply, but when the cost of getting the logs will increase from year to year? If this is done, will there be any profits during the last of the twenty years? Logging railroads which are being built at the present time are expensive and much of the territory into which they are being built is more or less mountainous, generally becoming more mountainous as the road is extended. The cost of the railroad required to log enough timber for the first five years' operations may not be one tenth of the total cost of the railroad that will be required to log the entire tract, and as the railroad is extended from year to year additional equipment will be required because of the greater distance from which the logs must be transported.

In the ordinary manufacturing enterprise, we usually have nothing to consider except raw material bought on the open market; the cost may rise or fall with the law of supply and demand, but is just as apt to be lower during the next ten years as it is to be higher. The Lumber manufacturer, however, is

(*Continued on page 72*)

* Address delivered at a joint meeting of the Oregon State Society of Certified Public Accountants and the Washington State Society of Certified Public Accountants. Journal of Accountancy.

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Collinwood Sta. CLEVELAND, OHIO

Prompt deliveries made from stocks in
NEW YORK
BOSTON
PHILADELPHIA
CHICAGO

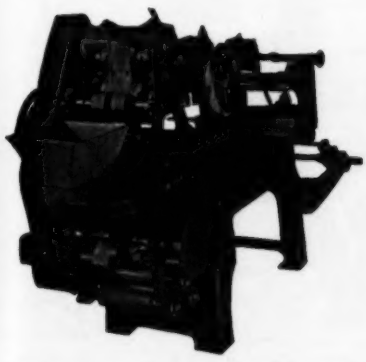
TRADE MARK

As To Quality.....

Heller & Merz is a "shirt sleeve" organization. For the manufacture of quality colors calls for hard work, unremitting care, and constant skill. We give it. Our customers know that.

As these dyestuffs are made so are they sold; the best in colors that dyestuff-brains and experience can produce. And the products and character of our customers show we've been on the right track for sixty years.

The HELLER & MERZ COMPANY
505 Hudson St., New York
Boston 227 Atlantic Ave. Chicago 146 W. Kinzie St. Philadelphia 114 Market St.
Springfield, Mass. 40 Albert St.
Factory—NEWARK, N. J.



HIGHEST SPEED Paper Bag Machinery

Get My Quotations Before Placing Your Orders
Special Machinery Designed and Built

A. L. PARRISH
1702 Robinson St., South Bend, Ind.

Imports of Paper and Paper Stock

NEW YORK, BOSTON, PHILADELPHIA AND OTHER PORTS

NEW YORK IMPORTS

WEEK ENDING MARCH 30, 1929

SUMMARY

Cigarette paper .....159 cs.
Wall paper .....100 bls., 59 cs.
Paper hangings .....16 bls., 24 cs.
Hanging paper .....12 cs.
Painted paper .....22 cs.
News print paper .....516 rolls
Printing paper .....193 rolls, 113 cs.
Wrapping paper .....42 cs.
Parchment paper .....2 bls., 6 cs.
Filter paper.....54 pkgs., 63 bls., 28 cs.
Drawing paper .....53 cs.
Tissue paper .....53 cs.
Coated tissue paper .....1 cs.
Decalcomania paper .....46 cs.
Metal coated paper .....40 cs.
Surface coated paper .....93 cs.
Baryta coated paper .....106 cs.
Gold coated paper .....8 cs.
Aluminum paper .....48 cs.
Ferro gallic paper .....3 cs.
Writing paper .....19 cs.
Pigment paper .....3 cs.
Cover paper .....3 cs.
Painting paper .....12 cs.
Colored paper .....30 cs.
Miscellaneous paper .....53 bls., 159 cs.

CIGARETTE PAPER

Standard Products Corp., Rochambeau, Havre 106 cs.
Standard Products Corp., Ile de France, Havre, 52 cs.
British American Tobacco Co., Andania, Liverpool, 1 cs.

WALL PAPER

J. E. Bernard & Co., Republic, Bremen, 2 cs.
Globe Shipping Co., Republic, Bremen, 11 bls.
Irving Trust Co., Hamburg, Hamburg, 55 cs.
Globe Shipping Co., Hamburg, Hamburg, 50 bls., 1 cs.
Globe Shipping Co., Hamburg, Hamburg, 7 bls.
G. J. Hunken, Stuttgart, Bremen, 1 cs., 2 bls.
F. A. Binder, Stuttgart, Bremen, 5 bls.
W. H. S. Lloyd & Co., American Shipper, London, 2 bls.
A. C. Dodman, Jr., Inc., Berengaria, Southampton, 5 bls.
F. J. Emmerich, Cedric, Liverpool, 17 bls.
F. A. Binder, America, Bremen, 1 ble.

PAPER HANGINGS

W. H. S. Lloyd & Co., Minnetonka, London, 11 bls., 2 cs.
A. C. Dodman, Jr., Inc., Andania, Liverpool, 5 bls.
Whiting & Patterson Co., Inc., Berengaria, Southampton, 22 cs.

HANGING PAPER

Schenckers, Inc., Rochambeau, Havre, 2 cs.
Titan Shipping Co., Rochambeau, Havre, 9 cs.
The Portenoy Co., Ile de France, Havre, 1 cs.

PAINTED PAPER

Keller Dorian Paper Co., Ile de France, Havre, 11 cs.
R. F. Downing & Co., Rochambeau, Havre, 11 cs.

NEWS PRINT PAPER

Parsons & Whittemore, Inc., Stuttgart, Bremen, 516 rolls.

PRINTING PAPER

Hoboken Trust Co., Republic, Bremen, 4 cs.
C. Steiner, Estrella, Marseilles, 8 cs.
Keuffel & Esser Co., Hamburg, Hamburg, 112 rolls.
Tamm & Co., Stuttgart, Bremen, 7 cs.
Gallagher & Ascher, Stuttgart, Bremen, 21 cs.
Parsons & Whittemore, Inc., Stuttgart, Bremen, 81 rolls.
P. C. Zuhlke, Pennland, Antwerp, 70 cs.
F. L. Kramer & Co., American Shipper, London, 3 cs.

WRAPPING PAPER

C. Steiner, Hamburg, Hamburg, 8 cs.
Birn & Wachenheim, Pennland, Antwerp, 34 cs.
Delaware Rayon Co., Pennland, Antwerp, 2 cs.

PARCHMENT PAPER

Walker, Goulard, Plehn Co., Hamburg, Hamburg, 2 bls.
D. C. Andrews & Co., America, Bremen, 6 cs.

FILTER PAPER

A. Giese & Son, Hamburg, Hamburg, 10 bls.
H. Reeve Angel & Co., Inc., Minnetonka, London, 10 cs.
E. Fougera & Co., Berengaria, Southampton, 64 pkgs.
H. Reeve Angel & Co., Inc., Berengaria, Southampton, 53 bls., 18 cs.

DRAWING PAPER

Keuffel & Esser Co., Hamburg, Hamburg, 5 cs.
Devoe & Reynolds Co., Ile de France, Havre, 8 cs.
International Forwarding Co., Mercier, Antwerp, 40 cs.

TISSUE PAPER

Old Master Paper & Pulp Corp., Hamburg, Hamburg, 32 cs.
F. B. Vandegrift & Co., Andania, Liverpool, 16 cs.
Baldwin Universal Co., Andania, Liverpool, 5 cs.

COATED TISSUE PAPER

Marr Duplicator Supplies Co., Berengaria, Southampton, 1 cs.

DECALCOMANIA PAPER

C. W. Sellers, Republic, Bremen, 2 cs.
C. W. Sellers, America, Bremen, 8 cs.
Phoenix Shipping Co., America, Bremen, 2 cs.
Phoenix Shipping Co., Hamburg, Hamburg, 5 cs.
B. F. Drakenfeld & Co., Cedric, Liverpool, 20 cs. (duplex).
B. F. Drakenfeld & Co., Cedric, Liverpool, 9 cs. (simplex).

METAL COATED PAPER

Hensel, Bruckman & Lorbacher, Republic, Bremen, 10 cs.
F. C. Gerlach, America, Bremen, 30 cs.

SURFACE COATED PAPER

Phoenix Shipping Co., Hamburg, Hamburg, 3 cs.
P. C. Zuhlke, Pennland, Antwerp, 90 cs.

BARYTA COATED PAPER

Globe Shipping Co., America, Bremen, 11 cs.
J. H. Schroeder Banking Corp., America, Bremen, 95 cs.

GOLD COATED PAPER

F. Murray Hill, Stuttgart, Bremen, 8 cs.

ALUMINUM PAPER

Standard Products Corp., Rochambeau, Havre, 43 cs.
Catty Foil Co., Pennland, Antwerp, 5 cs.

FERRO GALLIC PAPER

Keuffel & Esser Co., Ascania, Southampton, 3 cs.

WRITING PAPER

Distinctive Writing Paper Co., Rochambeau, Havre, 10 cs.
Japan Paper Co., Rochambeau, Havre, 4 cs.
American Express Co., Waukegan, Havre, 2 cs.
Japan Paper Co., Ile de France, Havre, 2 cs.
Coenca Morrison Co., Ile de France, Havre, 1 cs.

PIGMENT PAPER

J. J. Murphy & Co., Hamburg, Hamburg, 1 cs.
Tamm & Co., Stuttgart, Bremen, 2 cs.

COVER PAPER

International Forwarding Co., Hamburg, Hamburg, 3 cs.

PAINTING PAPER

Martin & Bechtold, Stuttgart, Bremen, 12 cs.

COLORED PAPER

S. Gilbert, America, Bremen, 3 0cs.

MISCELLANEOUS PAPER

P. H. Petry & Co., Republic, Bremen, 1 cs.
L. A. Consmiller, Republic, Bremen, 5 cs.
Borden Riley Paper Co., Estrella, Marseilles, 13 cs.
American Express Co., Estrella, Marseilles, 75 cs.
P. J. Schweitzer, Rochambeau, Havre, 29 cs.
Japan Paper Co., Ile de France, Havre, 2 cs.
F. C. Strype, Ile de France, Havre, 11 cs.
J. Beckhard, Ryndam, Rotterdam, 16 cs.
Heemsoth, Basse & Co., Ryndam, Rotterdam, 53 bls.
P. H. Petry & Co., Ryndam, Rotterdam, 9 cs.

RAGS, BAGGINGS, ETC.

E. J. Keller Co., Inc., Examiner, ——, 68 bls. rags.
National City Bank, Republic, Bremen, 27 bls. rags.
C. Mayer, Republic, Bremen, 10 bls. rags.
A. W. Fenton, Inc., Republic, Bremen, 19 bls. rags.
Chemical National Bank, Estrella, Barcelona, 180 bls. rags.
W. Schall & Co., Estrella, Barcelona, 54 bls. rags.
A. W. Fenton, Inc., Boston City, Bristol, 87 bls. rags.
C. R. Spence, Hatteras, Dublin, 220 bls. rags.
T. D. Downing & Co., Hatteras, Dublin, 35 bls. bagging.
Garfield National Bank, Hamburg, Hamburg, 39 bls. jute waste.
Castle & Overton, Inc., Waukegan, Havre, 424 bls. rags.
Castle & Overton, Inc., Waukegan, Havre, 198 bls. bagging.
C. Belsky, Waukegan, Havre, 28 bls. rags.
V. Galaup, Waukegan, Havre, 416 bls. rags.
D. M. Hicks, Inc., Waukegan, Havre, 44 bls. bagging.
Katzenstein & Keene, Inc., Waukegan, Dunkirk, 119 bls. bagging.
International By-Products Co., Waukegan, Dunkirk, 218 bls. rags.
E. J. Keller Co., Inc., Waukegan, ——, 55 bls. bagging.
E. J. Keller Co., Inc., Waukegan, ——, 20 bls. linen threads.
J. Cohen Sons, Inc., Andania, Liverpool, 78 bls. rags.
Van Oppen & Co., Ryndam, Rotterdam, 26 bls. paper stock.
Marquardt Hewitt Co., Ryndam, Rotterdam, 13 bls. rags.
V. Galaup, Ryndam, Rotterdam, 80 bls. rags.
Merchants National Bank, Ryndam, Rotterdam, 116 bls. rags.
French American Banking Corp., San Francisco Maru, Leghorn, 47 bls. rags.
I. H. Brand, San Francisco Maru, Oran, 409 bls. rags.
E. J. Keller Co., Inc., San Francisco Maru, ——, 82 bls. bagging.
F. Stern, America, Bremen, 183 bls. rags.
A. W. Fenton, Inc., America, Bremen, 59 bls. rags.
French American Banking Corp., Cabo Mayor, Genoa, 170 bls. rags.
French American Banking Corp., Cabo Mayor, Leghorn, 89 bls. rags.
Union Bank & Trust Co., Cabo Mayor, Barcelona, 181 bls. rags.
Bank of The Manhattan Co., Cabo Mayor, Malaga, 80 bls. rags.

OLD ROPE

International Purchasing Co., Examiner, Genoa, 168 coils.
Brown Bros. & Co., Republic, Bremen, 31 coils.
W. Schall & Co., Estrella, Barcelona, 61 coils.
Brown Bros. & Co., Boston City, Bristol, 154 coils.
Irving Trust Co., Minnetonka, London, 36 coils.
V. Galaup, Waukegan, Dunkirk, 55 bales.
Anglo South American Trust Co., Cedric, Liverpool, 68 coils.
S. Birkenstein & Sons, San Francisco Maru, Oran, 68 coils.
Brown Bros. & Co., Cabo Mayor, Genoa, 122 bales.

CASEIN

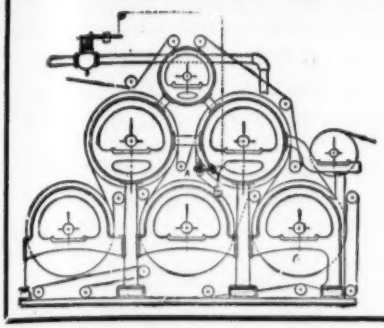
T. M. Duche & Sons, Sud Pacifico, Buenos Aires, 2,085 bags, 125,100 kilos.
A. Hurst & Co., Rochambeau, Havre, 67 bags.
Karolith Corp., Rochambeau, Havre, 134 bags.
Atterbury Bros., Inc., Western World, Buenos Aires, 834 bags.
Kalbdeisch Corp., Western World, Buenos Aires, 1,084 bags.
Champion Coated Paper Co., Western World, Buenos Aires, 3,890 bags.
Crawford Keen Co., Oakspring, Buenos Aires, 417 bags, 25,020 kilos.

WOOD PULP

Castle & Overton, Inc., Republic, Bremen, 1,190 bls. wood pulp, 189 tons.
Castle & Overton, Inc., Stuttgart, Bremen, 495 bls. wood pulp.
The Borregaard Co., Inc., Sagauche, Sarpsborg, 110 bls. sulphate, 18 tons.
J. Andersen & Co., Sagauche, Sarpsborg, 600 bls. sulphate, 100 tons.

(Continued on page 70)

The Pickles Drying Regulator



WE ARE SAFE IN OUR PROPOSITION

YOU'LL MAKE NO MISTAKE IN ACCEPTING IT

Pickles Drying Regulator

will do everything we claim for it and more. The test costs you nothing until you are satisfied. Many mills tried one and now have every machine equipped. Write for list of users and other information.

W. F. PICKLES Buckland, Conn.

The B Co.-INC.

QUALITY PULPS

IMMEDIATE DELIVERY
FROM DOCK

F:HAGA "FORSHAGA" Bleached Sulphite

KRAFT HURUM NORWAY SPECIAL "HURUM SPECIAL" Extra Strong Kraft

KOOS BAC "BAMBLE" Extra Strong Kraft

Fresh Monthly Consignments from Abroad—No Closed Winter Season

The Borregaard Company
Incorporated
200 FIFTH AVENUE NEW YORK, N. Y.

THE DRAPER FELTS

All kinds and styles of Felts for all kinds and styles of Papers.

Write us about your Felt problems and let us help you reduce your Felt Costs—we will call anywhere at any time.

DRAPER BROS. COMPANY
CANTON, MASS.
Woolen manufacturers since 1856

EASTWOOD
FOURDRINIER-CYLINDER-WASHER
WIRES

EASTWOOD WIRE CORPORATION, BELLEVILLE N.J. U.S.A.

Imports of Paper and Paper Stock

(*Continued from page 68*)

E. J. Keller Co., Inc., America, ——, 112 bls. wood pulp, 16 tons.

WOOD PULP WADDING

Birn & Wachenheim, Ryndam, Rotterdam, 100 bls.

BOSTON IMPORTS

WEEK ENDING MARCH 30, 1929

1st National Bank of Boston, Oakspring, Buenos Aires, 1,668 bags casein, 100,080 kilos.

Atterbury Bros., Inc., Oakspring, Buenos Aires, 1,668 bags casein, 100,080 kilos.

Kalbfleisch Corp., Oakspring, Buenos Aires, 1,251 bags casein, 75,060 kilos.

E. J. Keller Co., Inc., J. Skinner, ——, 106 bls. rags.

Castle & Overton, Inc., West Harcuvar, Germany, 510 bls. wood pulp.

Castle & Overton, Inc., West Harcuvar, Germany, 35 bls. rags.

PHILADELPHIA IMPORTS

WEEK ENDING MARCH 30, 1929

Union Bank & Trust Co., Examelia, Marseilles, 127 rolls old rope.

Curtis Publishing Co., Waukegan, Havre, 25 bls. bagging.

D. I. Murphy, Waukegan, Havre, 519 bls. rags.

Katzenstein & Keene, Inc., Waukegan, Havre, 454 bls. rags.

J. M. Jaffe, Waukegan, Havre, 21 bls. rags.

Frankel Bros., Waukegan, Havre, 4 bls. rags.

Castle & Overton, Inc., Waukegan, Havre, 138 bls. rags.

Castle & Overton, Inc., Waukegan, Dunkirk, 235 bls. rags.

Katzenstein & Keene, Inc., Waukegan, Dunkirk, 220 bls. rags.

D. I. Murphy, Waukegan, Dunkirk, 218 bls. rags.

Bank of The Manhattan Co., Waukegan, Dunkirk, 84 bls. rags.

E. J. Keller Co., Inc., Estrella, ——, 140 bls. rags.

E. J. Keller Co., Inc., London Exchange, ——, 121 bls. old rope.

E. J. Keller Co., Inc., London Exchange, ——, 164 bls. rags.

Castle & Overton, Inc., London Exchange, England, 76 bls. old rope.

Castle & Overton, Inc., London Exchange, England, 124 bls. rags.

Castle & Overton, Inc., West Harcuvar, Germany, 982 bls. wood pulp.

Castle & Overton, Inc., Koeln, Germany, 118 bls. rags.

Castle & Overton, Inc., Anaconda, Belgium, 313 bls. rags.

BALTIMORE IMPORTS

WEEK ENDING MARCH 30, 1929

Congoleum Nairn Co., Examiner, Leghorn, 633 bls. rags.

NEW ORLEANS IMPORTS

WEEK ENDING MARCH 30, 1929

E. J. Keller Co., Inc., Gand, ——, 391 bls. flax waste.

NORFOLK IMPORTS

WEEK ENDING MARCH 30, 1929

J. Andersen & Co., Sagauche, Sarpsborg, 3,750 bls. sulphite, 625 tons.

The Borregaard Co., Inc., Sagauche, Sarpsborg, 1,200 bls. sulphate, 200 tons.

The Borregaard Co., Inc., Sagauche, Hurum, 2,400 bls. sulphate, 400 tons.

The Borregaard Co., Inc., Sagauche, Hurum, 428 bls. sulphate, 71 tons.

CHESTER IMPORTS

WEEK ENDING MARCH 30, 1929

The Borregaard Co., Inc., Sagauche, Hurum, 244 bls. sulphate, 41 tons.

International's Hydro Subsidiary

The first annual report of Canadian Hydro-Electric Corporation, Limited, for the year ended December 31 last, is now in the hands of shareholders. This company controls the Gatineau Power Company, Gatineau Electric Light Company, Limited, and the St. John River Power Company and is a subsidiary of the International Paper & Power Company.

Gross revenue for the year is shown at $4,367,393, from which is deducted expenses at $874,383, interest at $2,272,810, discount on funded debt at $146,708, depreciation at $297,426, and prepared dividends at $750,000, leaving a surplus of $26,065. Previous surplus was brought forward at $6,816,669, making a total surplus in the current report of $6,842,734.

A. R. Graustein, the president, in his report, states that the total installed capacity in the generating extensions of the company at the close of 1928 was 479,600 h.p. and extensions to several of the plants, now in progress, will increase this total to 562,600 h.p. early in 1929. He adds:

"The year under review marked the conclusion of the initial stage of the company's construction programme on the Gatineau river. Outstanding in this connection was the completion of the largest single unit in the system—the Paugan Falls generating station, one of the largest in North America, with a designed capacity of 272,000 horsepower, and a present installation of 204,000 horsepower. This plant was placed in operation on October 1st, 1928, and immediately commenced delivery of a block of 80,000 horsepower to the Hydro-Electric Power Commission of Ontario under a thirty-year contract which calls for increasing amounts annually up to a total of 260,000 horsepower to be reached in 1931. A noteworthy feature in this connection is that power is delivered to the commission over a 220,000 volt line, the highest voltage transmission line in Canada."

Great Lakes Paper Record Output

Fort William now claims the world's record for news print production from a single paper machine. The Great Lakes Pulp and Paper Company there produced in one day of 24 hours from one paper unit, 151 tons and 340 pounds of news print, breaking all former records. The previous record was held by the Gatineau mill of the International Pulp and Paper Company which produced 147 tons of news print in 24 hours.

Box Board Production For February

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., April 1, 1929.—February production of box board, based on reports to the Department of Commerce by 93 firms operating 120 plants (reports for earlier months including four concerns now out of business) was 81.8 per cent of capacity, as compared with 86.2 per cent in January and 77.6 per cent in February, 1928. In the following table the capacity data vary according to the normal number of working days in each month:

Year and Month	Operation: Inch hours: Capacity	Operation: Inch hours: Operated	Operation: Per cent of Capacity	Production: Short Tons: Capacity	Production: Short Tons: Output	Production: Per cent of Capacity	New Orders: Short Tons	Unfilled Orders (end of month): Short Tons
1928								
Jan.	10,372,900	7,833,458	75.5	273,125	203,882	74.6	204,128	80,417
Feb.	10,372,900	8,136,737	78.4	273,125	211,862	77.6	215,333	85,862
March	11,312,244	8,843,542	78.2	297,108	227,344	76.5	244,871	93,380
April	10,474,300	8,311,710	79.4	275,100	221,079	80.4	211,304	84,513
May	10,893,272	8,733,965	80.2	286,104	242,394	84.7	224,366	73,157
June	10,893,272	8,199,515	75.3	286,104	228,646	79.9	228,252	77,782
July	10,474,300	7,992,170	76.3	275,100	201,153	73.1	209,976	79,492
August	11,312,244	9,236,068	81.6	297,108	230,750	77.7	236,682	81,816
Sept.	10,055,328	8,344,464	83.0	264,096	224,971	85.2	234,449	87,097
Oct.	11,384,820	9,365,352	82.3	299,052	243,794	81.5	240,391	81,022
Nov.	10,541,500	8,666,458	82.2	287,976	241,924	84.0	248,147	93,203
Dec.	10,541,500	7,631,500	72.4	287,976	205,046	71.2	197,148	94,174
Total (year)	128,628,580	101,294,939	78.7	3,401,974	2,682,845	78.9	2,695,047	.....
1929								
Jan.	*10,963,160	*8,962,124	*81.7	287,976	*248,249	*86.2	*237,716	83,661
Feb.	10,119,840	8,193,874	81.0	279,600	228,729	81.8	229,441	84,935

Year and Month	Shipments of boxboard: Short Tons	Stocks of boxboard, end of month: Short Tons	Consumption of waste paper: Capacity: Short Tons	Consumption of waste paper: Consumed: Short Tons	Per cent of Capacity	Stocks of waste paper, end of month: At plants: Short Tons	Stocks of waste paper, end of month: In transit and unshipped purchases: Short Tons
1928							
January	196,984	49,032	255,225	189,744	74.3	153,747	62,181
February	209,477	50,350	255,225	193,966	76.0	140,104	60,038
March	237,621	40,439	276,966	209,649	75.7	139,255	47,322
April	220,315	40,319	256,450	211,898	82.6	132,621	47,551
May	235,794	49,107	266,708	220,750	82.8	127,217	46,375
June	223,901	53,560	266,708	204,468	76.7	130,484	43,480
July	203,741	49,969	256,450	190,810	74.4	132,265	62,056
August	233,104	47,709	276,966	213,626	77.1	117,009	48,108
September	228,880	45,271	246,192	217,361	88.3	116,197	53,344
October	245,133	43,627	289,440	240,930	83.2	127,989	73,235
November	235,228	47,693	268,000	222,693	83.1	136,100	49,982
December	197,029	55,624	268,000	196,164	73.2	148,906	43,447
Total (year)	2,667,207	.....	3,182,330	2,512,059	78.9	.....	.....
1929							
January	*247,706	*56,610	268,000	*230,528	86.0	*135,787	*49,104
February	228,319	57,468	247,440	210,639	85.1	124,153	54,121

* Revised.

One piece--No folds

PAPRUS DISHES are *moulded* in one piece from fresh pulp—without folds, without staples. They are rigid as wood. Yet they cost less than other dishes!

These are talking points that help your salesmen get orders. You can increase your business with Paprus Dishes. Write for prices.

Paprus Dishes used as covered container

PAPRUS DISHES

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General Sales Offices: GRAYBAR BLDG., NEW YORK
Factory: Waterville, Maine
JOHN M. HART COMPANY, INC., *Manager of Sales*

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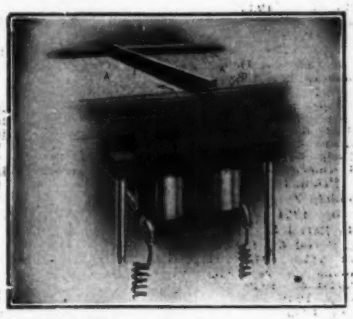
Are you making paper for insulating purposes? If so, our *Type B Iron Extractors* are a necessary part of your equipment.



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Electrical Specialists Holyoke, Mass. *Established 1885*

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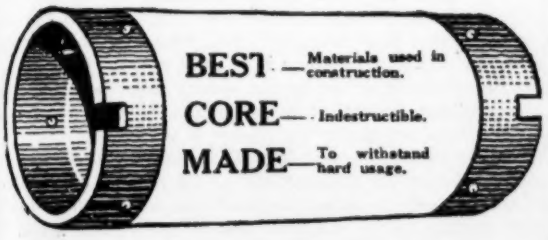
The Use of

ELIXMAN CORES

protects your rolls and insures their delivery to your customer in perfect condition. They eliminate claims for damages.

SHIPPING INSURANCE



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Canadian Elixman Company
HAMILTON, ONTARIO

Elixman Paper Core Company
CORINTH, N. Y.

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Sure power contributes materially to the continuous operation of machinery. This line shaft, for instance, is driven from a 200 H.P. synchronous motor by a Morse Silent Chain. Its dependable and efficient operation helps to insure greater production.
Lower Power Costs are often possible by using Morse Drives, correctly applied to meet your specific requirements. Ask a Morse Transmission Engineer for complete data.

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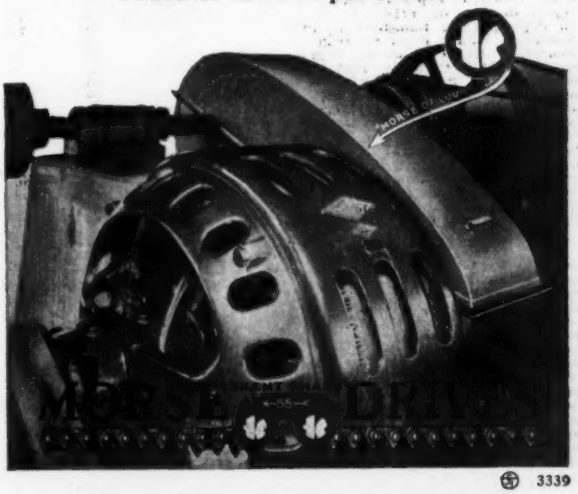
Branches in Principal Cities.



3339

Paper Mill Stocks and Bonds

Quoted by Taylor & White, 45 Wall street, New York City, to whom all inquiry for quotations on these or any other Securities is referred.

BONDS	BID	ASKED
Abitibi Power & Paper 5s, 1943	90	91
Abitibi Power & Paper 6s, serially to 1934	100	102
American Writing Paper 6s, 1947	81	87
Bastrop Pulp & Paper 6½s, 1940	103	105½
Bedford Pulp & Paper 6½s, 1942	97	100
Beigo-Canadian Paper 6s, 1943	100	103
British-Columbia Pulp & Paper 6s, 1950	89	92
Brown Paper Mills Serial 6s, 1941	97	100
Brown Company 5½s, 1946	98	101
Bryant Paper 6s, 1942	98	101½
Canadian Paper Board 7s, 19337	97	99½
Cape Breton Pulp & Paper 6s, 1932	103	...
Celotex Company 6s, 1929	95	99
Celotex Company 6½s, 1939	100	102
Celotex Company of Chicago, Debenture 6s, 1936	95	98
Central Paper Company Serial 6½s, 1942	86	89
Central Paper 7s, 1934	78	...
Champion Coated Paper Serial 6½s, 1934	100	...
Champion Coated Fibre Notes 6s, 1941	100	102
Champion Fibre Notes 6s, 1941	100	102
Champion Fibre Notes 8s, 1930	95	...
Champion Paper Corp. 6s, 1945	95	98
Container Corp. of America Debenture 6s, 1936, ex-warrants	101	104
Continental Paper Products 6½s, 1943	90	99
Cornell Wood Products 7½s, 1937	103	...
Crown Willamette 6s, 1951	101	102
Dells Paper & Pulp Serial 6s, 1938	95	98
Dixon Board Mills Serial 6s, 1942	80	...
Donnaconna Paper 5½s, 1948	93	...
Eastern Manufacturing Co. 7s, 1938	97	100
Escanaba Paper Serial 6s, 1939	98	100
Escanaba Paper 6½s, 1935	96	99
Filer Fibre Serial 7s, 1935	90	95
Fort Irange Paper 7s, 1942	101	...
Fort William Paper 6s, 1946	100	104
Fraser Company 6s, 1950	103	105
Hammermill Paper Serial 6s, 1939	100	...
Hawley Pulp & Lumber 6s, 1946	96	...
Hawthorne Paper Company 6s, 1937	80	...
Hoberg Paper & Fibre 7s, 1937	94	97
Industrial Fibre Corp. Debenture 8s, 1933	100	...
Itasca Paper & Prairie River Power Serial 5½s, 1938	99½	...
Itasca Paper & Prairie River Power Serial 6s, 1938	99	...
Jessup & Moore First 6s, 1945	83	90
Kalamazoo Vegetable Parchment 6s, 1938	99	101
Lake Superior Paper 6s, 1941	105	108
Marathon Paper Mills Serial 5½s, 1942	99	101
Marinette & Menominee 7½s, 1936	103	105
Mead Pulp & Paper 5% Notes Serially, 1937	95	100
Mead Fibre 7s, 1937	97	101
Minnesota Ontario Paper Serial 6s, 1945	97½	100
Murray Bay Paper Serial 6½s, 1947	102	105
Munising Paper Serial 6s, 1936	98	...
Nekoosa Edwards Paper 6s, 1928-42	96	...
Ontario Pulp & Paper 6s, 1931	108½	110½
Orono Pulp & Paper 6s, 1943	99	...
Orono Pulp & Paper 5s, 1941	96½	...
Oswego Falls Corp. 6s, 1941	99	102
Parker-Young Company 6½s, 1944	98	100
Paterson Parchment Paper 6s, 1938	101	103
Penobscot Chemical Fibre 6s, 1942	102	105
Port Alfred Pulp & Paper 5½s, 1947	98	100
Price Brothers 6s, 1943	105	...
Provincial Paper 5½s, 1947	98½	...
Queen City Paper 7s, 1933	98	...
River Raisin Paper 6s, 1936	98	100
Riordan Pulp & Paper 6s, 1942	102	104
Rolland Paper 6s, 1937	99	101
St. Croix Paper Serial 5s, 1937	99	...
St. Helen Pulp & Paper 6½s, 1931	99	102
St. Maurice Valley Corp. 6s, 1945	101	104
St. Maurice Valley Corp. 5½s, 1947	98½	100½
St. Regis Paper of Canada 6s, 1931	100	101½
St. Regis Paper of Canada 6½s, 1934	100	102
Smith (Howard) Paper Mills 7s, 1941	104	106
Spanish River Pulp & Paper 6s, 1931	108	110
Stevens-Thompson Paper 6s, 1942	94	96
Taggart Brothers 6s, 1944	95	100
Tait Paper & Color Industries 6s, 1934	88	92
Ticonderoga Pulp & Paper 5s, 1930	94	...
Ticonderoga Pulp & Paper 6s, 1940	100	102
Tomahawk Kraft Paper 6s, 1938	98	...
Tomahawk Pulp Paper 7s, 1932	99	...
Tonawanda Paper 5½s, Series 1941	99	102
Union Bag & Paper Power 6s, 1932	98	100
United Wall Paper Factories 6s, 1947	96	99
Warren (S. D.) Company 6s, 1945	103	105
Watab Paper 6½s, 1942	102	...
Waterway Paper Products 6s, 1931	100	101½
Wayagamack Pulp & Paper 6s, 1951	103	105
Westfield River Paper Serial 7s, 1943	89	93
Whitmer-Parson Pulp & Lumber 8s, 1938	20	25
Whitaker Paper 7s, 1942	108	110

STOCKS	BID	ASKED
American Box Board, Pfd.	9¼	10¼
American Box Board, Com.	9¼	10¼
Am. Tissue Mills, 7% Pfd.	90	93
British Columbia P. & P. Pfd.	75	80
Brompton Pulp & Paper, 8% Pfd.	100	...
Champion Fibre, 7% Pfd.	108	110
Diem & Wing, 7% Pfd.	92	97
Eastern Mfg. Co. 1st Pfd.	55	...
Great Northern Paper, Com.	75	78
Hammermill Paper, new 6% Pfd.	100	...
Hinde & Dauch, Com.	125	None Off.
Hinde & Dauch, 6% Pfd.	102	None Off
Holyoke Card & Paper	160	None Off
Marathon Paper Mills, Com.	140	...
Mengel Co., Pfd.	102	104
Midwest Box Co., 8% Pfd.	98	102
Midwest Box Co., 6% Pfd.	95	99
Louis De Jonge Co., 7% Pfd.	94	97
Oxford Papers, Com.	105	...
Oxford Paper Co., Pfd.	102	111
Penobscot Chemical Fibre, Com.	80	...
Richardson Co., Com.	170	...
Sabin Robbins Paper Co., 8% Pfd.	105	110
St. Croix Paper	155	...
St. Regis Paper Co., 7% Cum. Pfd.	105	108
Westfield River Paper Co., 1st Pfd.	Wanted	None Off
West Virginia Pulp and Paper Company	55	57
West Virginia Pulp and Paper, Pfd.	100	104
Whitaker Paper, 7% Cum. Pfd.	105	None Off.

DEPRECIATION IN LUMBER INDUSTRY

(*Continued from page 66*)

faced with the fact that while he already owns his raw material, the cost of getting it to his mill, that is, a further cost of the raw material, will increase from year to year without fail; and while it may be possible for him to show a very satisfactory profit in the first year, by cutting the most accessible timber, is it safe for him to consider that this is all profit and that similar results may be expected in succeeding years?

An Illustration

To present a little more clearly the situation which I have tried to outline, let us assume, for illustration, that a company is formed, acquires a tract of timber ten miles square and builds a sawmill in one corner of the tract. The timber on the tract is estimated to supply logs for the operation of the mill for twenty years, and it will require the construction of one mile of main-line logging railroad the first year and an additional mile each succeeding year to get all the timber on the tract to the mill and to cut it.

Let us also assume that the cost of constructing the logging railroad will average $10,000 a mile and that the company constructs the first five miles of logging railroad before commencing any of its operations. At the end of the first year we should then find in the accounts an investment of $50,000 in logging railroad. With the knowledge that it will take twenty years to log off the tract of timber we could then establish a depreciation rate of 5 per cent per annum and charge against the first year's operations $2500 for depreciation of logging railroad. If we look ahead, however, we shall find at the end of the twenty years there will be an investment of $200,000 in logging railroad, a considerable portion of which has been on the books but a short time. If the company had continued during the twenty years using a rate of 5 per cent for depreciating its logging railroad, there would have been a constantly increasing annual charge for depreciation, but at the end of the period there would remain a large balance in the asset account representing a railroad for which there was no further use. This would also apply to the constantly increasing amount of logging equipment which it would be necessary to acquire during the extension of the operations. I am assuming that the cost of the spur lines which are built from time to time as feeders to the main line of the logging railroad has been written off as the timber tributary to them has been cut out. It is evident that the ordinary rules for providing for depreciation will not fit the situation which I have described. In the first place we do not have the full cost of the plant that is required to complete the operations, and in the second place when the operation has been completed the plant has no value, for there is no more raw material.

In order to arrive at the proper annual depreciation charge, there is a method which I think is logical and applicable to the conditions I have described. The method is as follows:

Before commencing operations, the company should obtain through its engineering department a careful survey of the entire tract, together with an estimate of the total cost of the logging railroad including logging equipment and accessories that would be adequate to remove all the timber.

In summarizing the principal points which I have endeavored to bring out, I repeat that a log-buying saw-mill is entirely dependent upon the logs which it may buy; a few years may see the removal of all the timber which can be economically transported to the mill. This feature should be carefully considered.

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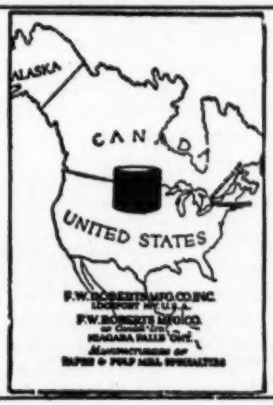

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New York Market Review

Office of the PAPER TRADE JOURNAL,
Wednesday, April 3, 1929.

Conditions in the local paper market were fairly satisfactory during the past week. Demand for the various standard grades was well up to average for the season and prices were maintained at previously quoted levels, in most instances. Sales forces of the leading paper organizations report that business, as a whole, compares favorably with the corresponding period of last year.

Now that quotations have been stabilized and the manufacturers have agreed to curtail production, the news print market is becoming more buoyant. Production at present is being maintained at about 79 per cent of capacity in the United States and Canada and the output is being freely absorbed by the publishers.

While the paper board market continues in a somewhat depressed position, an improvement in the situation is anticipated in the near future, in some quarters. The fine paper market continues to exhibit a strong undertone while tissues are in slightly better request. The coarse paper market is little changed and wrapping paper is still moving at a steady pace.

Mechanical Pulp

Demand for both domestic and imported ground wood is fairly persistent. Although production has been curtailed somewhat, both at home and abroad, offerings are apparently large enough to take care of immediate requirements. Quotations on the various grades of mechanical pulp are generally holding to schedule and there is little talk of concessions around.

Chemical Pulp

The chemical pulp market continues in a strong position. Both foreign and domestic producers are well sold ahead, especially on sulphite grades. It is reported that approximately 25 per cent of the Swedish output for 1930 has already been contracted for. Prices of the various grades are generally steady and unchanged and shading is infrequent. Unbleached sulphite is particularly firm at present.

Old Rope and Bagging

Manila old rope is still in heavy request from the paper mills and prices on both domestic and foreign grades rule firm. Mixed strings are moderately active. The bagging market is rather spotty although roofing bagging is in excellent demand. Scrap bagging is moving rather slowly. Prices are practically unchanged.

Rags

Trading in the domestic rag market was mostly along routine lines. Cotton cuttings are attracting some attention and roofing grades are moving at a normal pace. Offerings of mixed rags are adequate for the prevailing demand. The foreign rag market is exhibiting a more favorable trend. No radical price changes have been recorded of late.

Waste Paper

Although the demand for the lower grades of paper stock has fallen off slightly the waste paper market continues in a sound position. Book stock is moving in a routine manner. Ledger stock is in improved request. Other grades are holding their own. No radical changes in quotations have been recorded of late.

Twine

Steadiness prevails in the local twine market. The various grades continue in excellent demand due to unusually heavy spring time requirements. Inquiries for future business are fairly numerous. Prices are generally holding to the schedule which has been maintained for some time past and the outlook for the market is encouraging.

Chemistry of Pulp and Paper Industry

The new edition of "Chemistry of Pulp and Paper Making" by Edwin B. Sutermeister, which was one of the outstanding contributions to the literature of pulp and paper manufacture when it first apeared in 1920 has just been issued by John Wiley & Sons, 440 Fourth Avenue, New York.

The author in the preface to the second edition says in part:

"Since this book first appeared in 1920 there has been much activity in the pulp and paper industry along technical lines. This has resulted in the development of several new processes and in increased knowledge of many others. It has seemed advisable, therefore, to go over the technical articles published since 1919, review and incorporate such material as seemed of sufficient importance, and rewrite any portions of this book which were found to be in error in the light of our increased knowledge. This has proved to be quite a task, and, even though the intentions were of the best, doubtless some material of importance has been omitted."

The new edition has been considerably expanded and it is believed that it will prove even more valuable than the first edition. The price is $6.50 per volume.

Leon S. Beverage Dead

[FROM OUR REGULAR CORRESPONDENT]

BOSTON, Mass., April 1, 1929.—Leon S. Beverage, 49, a traveling salesman for Whitney Brothers, Inc., this city, fell dead from heart disease Wednesday morning, March 27, at South Windham, Me. He had just left a customer's factory and had started across the street, when he was stricken. He was taken into the office, but was beyond help. Mr. Beverage was born at Rockland, Me., where he had lived until 21 years ago, when he removed to Portland. For the last 12 years he had been employed by Whitney Brothers as a salesman. He was a loyal, honest and very intelligent and held in high esteem by his employers. A large number of the paper trade, including Matthew O. Byrne, of Whitney Brothers, and others, attended the funeral in Portland, Saturday. Mr. Beverage is survived by his wife, formerly Miss Mary Kilgore, of Lewiston; a sister, Mrs. Cora Whitman, of Rockland, and a brother, Allen, of Trenton, N. J.

Awards for Government Paper

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., April 3, 1929.—The Worthy Paper Company Association has been awarded the contract for furnishing the Government Printing Office with 23,485 pounds (76,500 sheets) of 38x48—307, plate finish 75 per cent rag book paper at 24 cents per pound, bids for which were received on March 8.

Reese & Reese, will furnish 1,600 pounds (5,000 sheets) of 24x36—320, high finish red sulphite paper at 10.45 cents per pound, bids for which were received on March 15.

Pulp Mill Knives for
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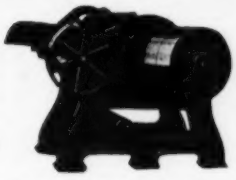
GIANT
RAGS — BURLAP
BAGGING — ROPE
JUTE BUTTS, MAGAZINES, CATALOGS OLD PAPERS, THREAD WASTE AND ALL GRADES OF RAGS CUT QUICKLY AND EFFICIENTLY WITH THE



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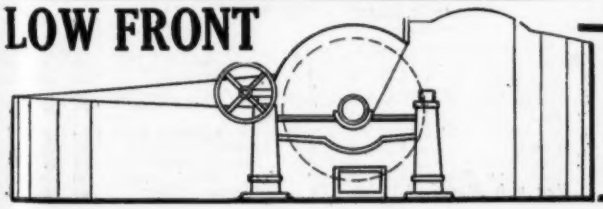

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BURNING, CHOPPING, KNOTS entirely absent.
——Beaters reconstructed——
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Miscellaneous Markets

Office of the PAPER TRADE JOURNAL,
Wednesday, April 3, 1929.

BLANC FIXE.—The position of the blanc fixe market is sound. Both the pulp and the powder are in good demand. Prices remain unchanged. The pulp is quoted at from $42.50 to $45.00 per ton, while the powder is selling at from 3¾ cents to 4½ cents per pound, in barrels, at works.

BLEACHING POWDER.—Demand for bleaching powder is seasonal. Shipments against contract are going forward in satisfactory volume. Prices are generally holding to schedule. Bleaching powder is still quoted at from $2.00 to $2.35 per 100 pounds, in large drums, at works, according to quantity.

CASEIN.—The casein market is practically unchanged. Prices rule steady. Domestic casein is quoted at from 16 cents to 16¼ cents per pound, while standard ground imported is still selling at 16 cents per pound and finely ground at 16¼ cents per pound, all in bags, car lot quantities.

CAUSTIC SODA.—Supplies of caustic soda are moving into consumption at an excellent pace. Prices remain steady and unchanged. Solid caustic soda is quoted at from $2.90 to $2.95, while the flake and the ground are still selling at from $3.30 to $3.35 per 100 pounds, in large drums, at works.

CHINA CLAY.—Steadiness prevails in the china clay market. Demand is fairly active and prices are holding to schedule without difficulty. Imported china clay is quoted at from $15 to $25 per ton, ship side, while domestic paper making clay is selling at from $8 to $13 per ton, at mine.

CHLORINE.—The chlorine market is exhibiting a strong undertone. Contract shipments have been fairly heavy. Prices remain unaltered. Chlorine is quoted at 3 cents per pound, in tanks, or multi-unit cars, at works, on standard contracts. The spot quotation ranges from 3¼ cents to 3½ cents per pound.

ROSIN.—The rosin market fluctuated considerably. At the naval stores, the grades of gum rosin used in the paper mills are now quoted at from $8.20 to $8.85 per 280 pounds, ex dock, in barrels. Wood rosin is selling at from $7.00 to $7.80 per 280 pounds, in barrels, at southern shipping points.

SALT CAKE.—Offerings of salt cake are still decidedly scarce. Demand for this product is persistent and prices are holding to previously quoted levels without difficulty. Salt cake is quoted at from $16 to $18 per ton, while crome salt cake is selling at from $14 to $15 per ton, in bulk, at works.

SODA ASH.—Conditions in the soda ash market are satisfactory. Production is being maintained in sufficient volume to take care of current requirements. Prices remain unchanged. Contract quotations on soda ash, in car lots, at works, per 100 pounds, are as follows: in bags, $1.32½; and in barrels, $1.55.

STARCH.—Trading in the starch market was mostly along routine lines during the past week. The contract movement is satisfactory for the time of the year. Prices remain steady. Special paper making starch is still quoted at $3.82 per 100 pounds, in bags, and at $3.99 per 100 pounds, in barrels.

SULPHATE OF ALUMINA.—Some improvement was noticed in the sulphate of alumina market. Prices are holding to previously quoted levels. Commercial grades of sulphate of alumina are quoted at from $1.40 to $1.55 and iron free at from $1.95 to $2.05 per 100 pounds, in bags, at works.

SULPHUR.—Most of the business transacted in the sulphur market was along routine lines. Sulphur is still quoted at $18 per ton, in lots of 1,000 tons, or over, on yearly contracts, and at $20 per ton for any smaller quantity over that period. On spot and nearby car loads, the quotation is $21 per ton.

TALC.—No radical changes have been recorded in the talc market of late. Prices are generally holding to schedule and shading is infrequent. Domestic talc is still selling at from $16 to $18 per ton, eastern mines, while imported talc is offered at from $18 to $20 per ton, ship side.

Market Quotations

Paper

(F. o. b. Mill)

Ledgers	11.00	@38.00
Bonds	9.00	@45.00
Writings—		
Extra Superfine	14.00	@32.00
Superfine	14.00	@32.00
Tub sized	10.00	@15.00
Engine sized	8.00	@11.00
Book, Cased—		
S. & S. C.	6.00	@ 7.50
M. F.	5.75	@ 7.00
Coated and Enamel	7.50	@12.00
Lithograph	7.50	@12.00
Tissues—Per Ream—		
White No. 1	.75	@ 1.00
Anti-Tarnish	1.35	@ 1.90
Colored	1.00	@ 2.00
White No. 2	.75	@ .80
Kraft	1.00	@ 1.10
Manila	.75	@ .80
Kraft—		
No. 1 Domestic	6.25	@ 6.50
No. 2 Domestic	5.25	@ 5.50
Southern	4.25	@ 4.50
Imported	6.50	@ 7.00
Manila—		
No. 1 Jute	9.00	@ 9.25
No. 2 Jute	7.75	@ 8.50
No. 1 Wood	4.75	@ 5.25
No. 2 Wood	4.00	@ 4.50
Butchers	3.75	@ 4.25
Fibre Papers—		
No. 1 Fibre	5.00	@ 5.50
No. 2 Fibre	4.75	@ 5.25
Common Bogus	2.75	@ 3.00
Screenings	3.00	@ 3.25
Card Middles	4.00	@ 5.00
Glassine—		
Bleached, basis 25 lbs	13.00	@16.00
Bleached, basis 20 lbs.	15.00	@16.00

(Delivered New York)

News—		
Rolls, contract	62.00	@ —
Rolls, spot	62.00	@ —
Sheets	67.00	@ —
Side Runs	47.00	@52.00
Boards—per ton—		
News	32.00	@39.50
Straw	52.50	@55.00
Chip	30.00	@37.50
Binders' Boards	65.00	@67.50
Sgl. Mla. Ll. Chip	44.00	@47.50
Wood Pulp	80.00	@85.00
Container	52.50	@55.00
85 Test Jute Liner	47.50	@53.00

Mechanical Pulp

(Ex-Dock)

No. 1 Imported—		
Moist	28.00	@31.25
Dry	32.00	@34.00
(F. o. b. Mill)		
No. 1 Domestic	26.00	@29.00
Screenings	15.00	@20.00

Chemical Pulp

(Ex-Dock, Atlantic Ports)

Sulphite (Imported)—		
Bleached	3.75	@ 4.40
Easy Bleaching	2.85	@ 2.90
No. 1 strong unbleached	2.60	@ 2.80
Mitscherlich unbleached	2.60	@ 3.25
No. 2 strong unbleached	2.40	@ 2.50
No. 1 Kraft	2.50	@ 2.75
No. 2 Kraft	2.40	@ 2.50
Sulphate—		
Bleached	375	@ 3.85
(F. o. b. Pulp Mill)		
Sulphite (Domestic)—		
Bleached	3.40	@ 4.75
Easy Bleaching Sulphite	2.60	@ 2.75
News Sulphite	2.40	@ 2.50
Mitscherlich	3.00	@ 3.25
Kraft (Domestic)	2.50	@ 3.30
Soda Bleached	3.25	@ 3.40
Sulphate Screenings—		
Coarse	.75	@ .95
Refined	1.50	@ 1.65

Domestic Rags

New Rags

(Prices to Mill f. o. b. N. Y.)

Shirt Cuttings—		
New White, No. 1	11.00	@11.50
New White, No. 2	8.00	@ 8.50
Silesias No. 1	7.50	@ 8.00
New Unbleached	11.00	@11.50
Washables	4.50	@ 5.00
Fancy	5.50	@ 6.00
Blue Overall	7.00	@ 7.50
New Blue Prints	5.25	@ 5.50
New Soft Blacks	5.25	@ 5.75
Mixed Khaki Cuttings	4.75	@ 5.25
Pink Corset Cuttings	8.00	@ 8.50
O. D. Khaki Cuttings	5.15	@ 5.75
Men's Corduroy	3.75	@ 4.25
New Mixed Blacks	3.50	@ 3.75

Old Rags

White, No. 1—		
Repacked	5.50	@ 6.00
Miscellaneous	4.50	@ 5.00
White, No. 2—		
Repacked	3.00	@ 3.50
Miscellaneous	2.50	@ 2.75
St. Soiled, White	2.00	@ 2.15
Thirds and Blues—		
Repacked	2.25	@ 2.50
Miscellaneous	1.75	@ 2.00
Black Stockings	3.25	@ 3.75
Roofing Rags—		
Cloth Strippings	1.70	@ 1.80
No. 1	1.70	@ 1.80
No. 2	1.55	@ 1.65
No. 3	1.30	@ 1.40
No. 4	1.25	@ 1.35
No. 5A	.90	@ 1.05

Foreign Rags

New Rags

New Dark Cuttings	2.50	@ 3.00
New Mixed Cuttings	2.75	@ 3.25
New Light Silesias	7.00	@ 7.50
Light Flannelettes	7.50	@ 8.00
Unbleached Cuttings	10.00	@11.00
New White Cuttings	10.50	@11.50
New Light Oxfords	7.00	@ 7.50
New Light Prints	5.50	@ 6.50

Old Rags

No. 1 White Linens	7.25	@ 8.00
No. 2 White Linens	5.50	@ 6.25
No. 3 White Linens	4.50	@ 5.00
No. 4 White Linens	3.00	@ 3.50
No. 1 White Cotton	5.50	@ 6.50
No. 2 White Cotton	4.50	@ 5.50
No. 3 White Cotton	3.00	@ 4.00
No. 4 White Cotton	1.90	@ 2.15
Extra Light Prints	2.75	@ 3.25
Ord. Light Prints	2.25	@ 2.50
Med Light Prints	1.90	@ 2.10
Dutch Blue Cottons	2.20	@ 2.40
French Blue Linens	2.75	@ 2.85
German Blue Linens	2.35	@ 2.55
German Blue Cottons	2.15	@ 2.25
Checks and Blues	1.85	@ 2.00
Lindsay Garments	1.90	@ 2.00
Dark Cottons	1.65	@ 1.70
Old Shopperies	1.55	@ 1.60
New Shopperies	1.50	@ 1.60
French Blues	2.10	@ 2.25

Old Rope and Bagging

(Prices to Mill f. o. b. N. Y.)

Gunny No. 1—		
Foreign	1.65	@ 1.75
Domestic	1.70	@ 1.75
Wool Tares, light	1.60	@ 1.65
Wool Tares, Heavy	1.65	@ 1.75
Bright Bagging	1.65	@ 1.70
Small Mixed Rope	1.25	@ 1.40
Manila Rope—		
Foreign	4.25	@ 4.50
Domestic	4.50	@ 4.75
New Burlap Cut	2.75	@ 3.00
Hessian Jute Threads—		
Foreign	3.50	@ 4.00
Domestic	3.25	@ 3.50

Old Waste Papers

(F. o. b. New York)

Shavings—		
Hard, white, No. 1	3.25	@ 3.50
Hard, white, No. 2	2.40	@ 2.55
Soft, White, No. 1	2.50	@ 2.60
White envelope cuttings	3.25	@ 3.50
Flat Stock—		
Stitchless	1.60	@ 1.70
Overissue Mag	1.60	@ 1.70
Solid Flat Book	1.50	@ 1.60
Crumpled No. 1	1.15	@ 1.25
Solid Book Ledger	2.00	@ 2.10
Ledger Stock	1.70	@ 1.80
New B. B. Chips	.65	@ .75
New Env. Cut	2.40	@ 2.60
Manilas—		
New Cuttings	1.60	@ 1.85
Extra No. 1 old	1.25	@ 1.35
Print	.75	@ .80
Container	.60	@ .65
Bogus Wrapper	.75	@ .85
Old Kraft Machine Compressed bales	1.75	@ 1.85
News—		
No. 1 White News	1.70	@ 1.75
Strictly Overissue	.85	@ .95
Strictly Folded	.65	@ .70
No. 1 Mixed Paper	.50	@ .55
Common Paper	.30	@ .35

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Twines

(F. o. b. Mill)

Cotton—			
No. 1	.39	@	.40
No. 2	.37	@	.38
No. 3	.36	@	.37
B. C., 18 basis	.38	@	.40
A. B. Italian, 18 basis	.48	@	.53
Finished Jute—			
Dark 18 basis	.24	@	.25
Light 18 basis	.27	@	.28
Jute Wrapping, 3-6 Ply—			
No. 1	.19	@	.21
No. 2	.18	@	.20
Tube Rope—			
4-ply and larger	.16	@	.17
Fine Tube Yarn—			
5-ply and larger	.21	@	.25
4-ply	.25	@	.29
3-ply	.28	@	.32
Unfinished India—			
Basis	.13	@	.14
Paper Makers Twine Balls	.11	@	.12
Box Twine, 2-3 ply	.15	@	.17
Jute Rope	.17	@	.19
Amer. Hemp, 6	.29	@	.31
Sisal Hay Rope—			
No. 1 Basis	.16	@	.18
No. 2 Basis	.14	@	.16
Sisal Lath Yarn—			
No. 1	.14	@	.16
No. 2	.12	@	.14
Manila Rope	.22	@	.24

CHICAGO

Paper

(F. o. b. Mill)

All Rag Bond	.35	@	.41
No. 1 Rag Bond	.25	@	.34
No. 2 Rag Bond	.14	@	.25
Water Marked Sulphite Bond	.09	@	.12
Sulphite Bond	.06¾	@	.11
Superfine writing	.18	@	.24
No. 1 fine writing	.14	@	.18
No. 2 fine writing	.12	@	.14
No. 3 fine writing	.08½	@	.12
No. 1 M. F. Book	.06½	@	.07¾
No. 2 M. F. Book	.05½	@	.06¾
No. 1 S.&S.C. Book	.06¾	@	.07¾
No. 2 S.&S.C. Book	.05¾	@	.06½
Coated Book	.07½	@	.12
Coated Label	.07½	@	.10
No. 1 Manila	.04¼	@	.05¾
No. 1 Fibre	.04¾	@	.05¾
No. 2 Manila	.04¼	@	.04¾
Butcher's Manila	.04	@	.04½
No. 1 Kraft	.06¾	@	.06½
Southern Kraft	.03¾	@	.04
No. 2 Kraft	.04	@	.04¼
Wood Tag Boards	.04¼	@	.06¾
Sulphite Screenings	.03	@	.03¼
Manila Tissue—			
24x36 Sheet	.07	@	.07¾
White Tissue—			
20x30 Sheet	.07¾	@	.07½

(Delivered Central Territory)

News, per ton—			
Rolls, contract	62.00	@	—
Sheets	67.00	@	—
Boards, per ton—			
Plain Chip	37.50	@	41.00
Solid News	47.50	@	—
Solid News	47.50	@	—
Manila Lined Chip	55.00	@	—
Container Lined—			
85 Test	65.00	@	70.00
100 Test	70.00	@	—

Old Papers

(F. o. b. Chicago)

Shavings—			
No. 1 Hard White	2.20	@	2.25
White Env. Cuttings	2.40	@	2.50
No. 1 Soft Shavings	2.00	@	2.10
No. 1 Mixed	.90	@	1.00
No. 2 Mixed	.70	@	.75
Ledger & Writings	1.45	@	1.50
Solid Books	1.25	@	1.40
Blanks	1.40	@	1.50
Krafts	1.60	@	1.75
New Kraft Cuts	2.15	@	2.25
Manila Envelope Cuttings	1.65	@	1.75
Ex. No. 1 Manila	1.30	@	1.45
Print Manila	.80	@	.85
Folded News (oversize)	.80	@	.85
Old Newspapers—			
No. 1	.70	@	.80
No. 2	.65	@	.70
Mixed Papers—			
No. 1	.65	@	.70
Roofing Stocks—			

(F. o. b. Chicago, net cash)

No. 1	30.00	@	—
No. 2	28.00	@	—

PHILADELPHIA

Paper

(F. o. b. Mill)

Bonds	.06	@	.40
Ledgers	.09	@	.40
Writings—			
Superfine	.12½	@	.18
Extra fine	.18	@	.22
Fine	.17	@	.26
Fine, No. 2	.15	@	.25
Fine, No. 3	.10	@	.20
Book, M. F.	.05½	@	.07
Book, S. S. & C.	.06	@	.07½
Book, Coated	.09½	@	.16
Coated Lithograph	.07	@	.11
Label	.07	@	.11
No. 1 Jute Manila	.08	@	.09
Manila Sul., No. 1	.04	@	.05½
Manila No. 2	.03	@	.04
No. 2 Kraft	.06	@	.06½
No. 1 Kraft	.06½	@	.07
Common Bogus	.03½	@	.04

(Delivered Philadelphia)

News Print Rolls	62.00	@	—
Straw Board	52.50	@	75.00
News Board	38.00	@	42.00
Chip Board	35.00	@	40.00
Wood Pulp Board	85.00	@	95.00
Binder Boards—			
No. 1, per ton	75.00		
No. 2, per ton	70.00		
Carload lots	68.00	@	70.00
Tarred Felts—			
Regular	53.00	@	55.00
Slaters (per roll)	.84	@	.94
Best Tarred, 1-ply (per roll)	1.85	@	1.95
Best Tarred, 2-ply (per roll)	1.44	@	1.54
Best Tarred, 3-ply	1.83	@	2.08

Domestic Rags (New)

(Price to Mill, f. o. b. Phila.)

Shirt Cuttings—			
New White, No. 1	.10½	@	.11
New White, No. 2	.07	@	.07½
Light Silesias	.07	@	.07½
Silesias, No. 1	.08½	@	.09
Black Silesia, soft	.05	@	.05½
New Unbleached	.10½	@	.11
Washable, No. 1	.04½	@	.05
Blue Overall	.07½	@	.08
Cottons—According to grades—			
Washable, No. 2	.03	@	—
New Blue	.03	@	.03½
Fancy			
New Black Soft	.05	@	.05¼
New Light Seconds	.02½	@	.03
New Dark Seconds	1.85	@	2.00
Khaki Cuttings—			
No. 1 O. D.	.05½	@	.05¾
No. 2 Mixed	.04½	@	.04¾
Corduroy	.03	@	.03½
New Canvas	.08½	@	.09
New Black Mixed	.03¾	@	.04½

Bagging

(F. o. b. Phila.)

Gunny, No. 1—			
Foreign	1.50	@	1.60
Domestic	1.75	@	—
Manila Rope	3.50	@	4.00
Sisal Rope	1.50	@	—
Mixed Rope	1.10	@	1.25
Scrap Burlaps—			
No. 1	1.50	@	1.60
No. 2	1.10	@	1.20
Wool Tares, heavy	3.00	@	—
Mixed Strings	1.15	@	1.25
No. 1, New Light Burlap	2.50	@	2.75
New Burlap Cuttings	2.00	@	2.25

Old Papers

(F. o. b. Phila.)

Shavings—			
No. 1 Hard White	3.20	@	3.25
No. 2 Hard White	2.75	@	3.00
No. 1 Soft White	2.50	@	2.60
No. 2 Soft White	1.90	@	2.00
No. 1 Mixed	1.50	@	1.60
No. 2 Mixed	.90	@	1.00
Solid Ledger Stock	1.85	@	1.90
Writing Paper	1.60	@	1.65
No. 1 Books, heavy	1.45	@	1.55
No. 2 Books, light	1.20	@	1.25
No. 1 New Manila	2.40	@	2.50
No. 1 Old Manila	1.50	@	1.60
Print Manila	.95	@	1.00
Container Manila	.85	@	.90
Old Kraft	2.25	@	2.50
Common paper	.50	@	.55
No. 1 Mixed Paper	.65	@	.70
Straw Board, Chip	.65	@	.70
Binders Board, Chip	.65	@	.70
Overissue News	.85	@	.90
Old Newspaper	.65	@	.70

Domestic Rags (Old)

White, No. 1—			
Repacked	4.25	@	4.50
Miscellaneous	3.50	@	3.75
White, No. 2—			
Thirds and Blues—			
Repacked	2.00	@	2.25
Miscellaneous	1.60	@	1.80
Black Stockings (Export)	3.90	@	4.25
Roofing Stock—			
Foreign No. 1	1.65	@	1.75
Repacked	.02½	@	.02¾
No. 2	1.30	@	1.35
No. 3 (Roofing)	1.15	@	1.25
No. 4	1.00	@	1.15
No. 5A	.75	@	.85
B	.65	@	.75
C	.65	@	.75

BOSTON

Paper

(F. o. b. Mill)

Ledgers—			
Sulphite	.07½	@	.15
Rag content	.15	@	.30
All rag	.38	@	.52½
Bonds—			
Sulphite	.06½	@	.11½
Rag content	.15	@	.30
All rag	.36½	@	.65
Writings	.07	@	.20
Superfines	.11	@	.31
Book, Super	.06	@	.09
Book, M. F.	.05¾	@	.08½
Book, Coated	.08½	@	.20
Coated Litho	.09	@	.12
Label	.09½	@	.15
Jute Manila No. 1	.11	@	.13
Manila, Sul. No. 1	.04¾	@	.06¾
Manila, Sul. No. 2	.03¾	@	.04½
No. 1 Kraft	—	@	.06½
No. 2 Kraft	.05¼	@	.06
Common Bogus	.02	@	.02¾

Delivered New England points

News Print Rolls	61.50	@	—
Straw Boards, rolls	.009		52.50
Straw Board in Sheets, basis 35s to 70s	54.50	@	55.00
Filled News Board	37.50	@	40.00
Chip Board	35.00	@	37.50
Single Manila Lined Chip	47.50	@	50.00
Single White, Patent Coated Newsboard			
Bender	67.50	@	80.00
Wood Pulp Board	80.00	@	85.00
Binder Boards	70.00	@	75.00

(F. o. b. Mill)

Tarred Felts—			
Regular, carload lots	65.00	@	—

Old Papers

(F. o. b. Boston)

Shavings—			
No. 1 Hard White	3.25	@	3.75
No. 2 Hard White	2.60	@	2.90
No. 1 Soft White	2.50	@	2.60
No. 1 Mixed	1.10	@	1.15
No. 2 Mixed	.85	@	.90
Solid Ledger Stock	2.35	@	2.45
No. 1 Books, Heavy	1.50	@	1.55
No. 1 Books, Light	—	@	1.15
Manila Env. Cuttings	2.00	@	2.25
No. 1 Old Manila	1.15	@	1.20
White Blank News	1.60	@	1.65
Old Kraft	—	@	1.80
Print Manila	.80	@	.90
No. 1 Mixed Paper	—	@	.55
Overissue News	.70	@	.85
Old Newspapers	.55	@	.60
Box Board, Chip	.55	@	.60

Bagging

(F. o. b. Boston)

Gunny No. 1—			
Foreign	1.70	@	1.75
Manila Rope—			
Foreign	4.25	@	—
Domestic	4.50	@	—
Mixed Strings	.90	@	1.00
Jute Wiil Strings	—	@	1.00
Scrap Burlaps	1.25	@	1.35
Scrap Sisal	1.60	@	1.80
Scrap Sisal for shredding	1.75	@	2.00
Wool Tares, heavy	—	@	1.50
New Burlap Cutting	1.90	@	2.00
Australian Wool Pouches	2.75	@	3.00

Domestic Rags (New)

(F. o. b. Boston)

Shirt Cuttings—			
New White No. 1	.09½	@	.10
Silesias, No. 1	.06	@	.06¾
New Unbleached	.10	@	.10¾
Fancy	.04	@	.04½
Washable	.04	@	.04½
Cottons—According to grades			
Blue Overalls	.06¼	@	.06¾
New Black, soft	.04	@	.04¾
Khaki Cuttings	.04	@	.04¾
O. D. Khaki	.05	@	—
Corduroy	.03	@	.03½
New Canvas	.08	@	.08½

Domestic Rags (Old)

(F. o. b. Boston)

Canvas	.04½	@	—
White No. 1—			
Repacked	4.75	@	5.25
Miscellaneous	5.00	@	—
White No. 2—			
Repacked	.04½	@	.05
Miscellaneous	.03½	@	.04
Twos and Blues	2.25	@	2.35
Thirds and Blues—			
Repacked	2.00	@	2.15
Miscellaneous	1.75	@	1.90
Roofing Stock—			
No. 1	1.65	@	1.75
No. 2	1.45	@	1.55
No. 3	1.05	@	1.10
No. 4	1.10	@	1.15

Foreign Rags

(F. o. b. Boston)

Dark Cottons	1.60	@	1.65
New No. 1 Shirt Cuttings	9.00	@	10.00
Dutch Blues	2.00	@	2.12½
Lace Curtains	5.10	@	5.50
New Checks & Blues	4.25	@	4.50
Old Fustians	1.90	@	—
Old Linsey Garments	1.85	@	1.90

TORONTO

Paper

(F. o. b. Mill)

Bond—			
No. 1 Sulphite	.12½	@	—
No. 2 Sulphite	.10¾	@	—
No. 1 Colored	.13½	@	—
No. 2 Colored	.11¼	@	—
Ledgers (sulphite)	—	@	—
Ledgers, No. 1	.36	@	—
Ledgers, No. 2	.27	@	—
Writing	.09½	@	.10
News f. o. b. Mills—			
Rolls (carloads)	3.25	@	—
Sheets (carloads)	3.75	@	—
Sheets (2 tons or over)	4.00	@	—
Book—			
No. 1 M. F. (carloads)	7.50	@	—
No. 2 M. F. (carloads	7.25	@	—
No. 3 M. F. (carloads)	7.00	@	—
No. 1 S. C. (carloads)	8.00	@	—
No. 2 S. C. (carloads)	7.75	@	—
No. 3 S. C. (carloads)	7.50	@	—
No. 1 Coated and Litho	13.25	@	—
No. 2 Coated and Litho	12.25	@	—
No. 3 Coated and Litho	11.50	@	—
Coated tinted	14.50	@	—
Wrapping—			
Rag Brown	4.95	@	—
White Wrap	5.25	@	—
"B" Manila	5.80	@	—
No. 1 Manila	6.65	@	—
Fiber	6.65	@	—
Kraft, M. F.	7.00	@	—
M. G.	7.00	@	—

Pulp

(F. o. b. Mill)

Ground Wood	30.00	@	31.00
Sulphite easy bleaching	62.00	@	—
Sulphite news grade	62.00	@	—
Sulphite, bleached	75.00	@	—
Sulphate	60.00	@	—

Old Waste Paper

(In carload lots, f. o. b. Toronto)

Shavings—			
White Env. Cut	3.00	@	—
Soft White Book Shavings	2.85	@	—
White Blk. News	1.60	@	—
Book and Ledger—			
Flat Magazine and Book Stock (old)	1.40	@	—
Light and Crumpled Book Stock	1.25	@	—
Ledgers and Writings	1.50	@	—
Solid Ledgers	1.50	@	—
Manilas—			
New Manila Cut	1.50	@	—
Printed Manilas	1.00	@	—
Kraft	2.25	@	—
News and Scrap—			
Strictly Overissue	.80	@	—
Strictly Folded	.80	@	—
No. 1 Mixed Paper	.70	@	—

Domestic Rags

(Price to mills, f. o. b. Toronto)

No. 1 White Shirt Cuttings	.11½	@	—
Fancy Shirt Cuttings	.05¼	@	—

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ESTABLISHED 1872

THE INTERNATIONAL WEEKLY OF THE PAPER AND PULP INDUSTRY AND THE PIONEER PUBLICATION IN ITS FIELD

FIFTY-SEVENTH YEAR

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CHAMPION

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During more than a half a century of pioneering Black-Clawson has never sponsored a piece of machinery without first making certain that it was right in every respect.

That is why Black-Clawson has come to be looked upon as a conservative organization and one that never speaks until it knows what it is talking about or moves until it knows where it is going.

And so, when the Champion Fourdrinier was developed, embodying many advanced features not found elsewhere, the opinion was freely expressed throughout the Industry that the Champion would unquestionably mark a long stride forward in construction and results.

That this early opinion was well founded is now borne out by the fact that every Champion installed has lived up to every confidence in its performance.

The Black-Clawson Company
Hamilton, Ohio
Shartle Bros. Machine Co., Middletown, Ohio
Export Offices: 15 Park Row, New York City
Builders of Highest Quality Paper and Pulp Mill Machinery
Patentees and Sole Builders of Vertical Dryers and Champion Fourdriniers

BLACK-CLAWSON

Champion Fourdriniers

Built with Machine-Tool Accuracy